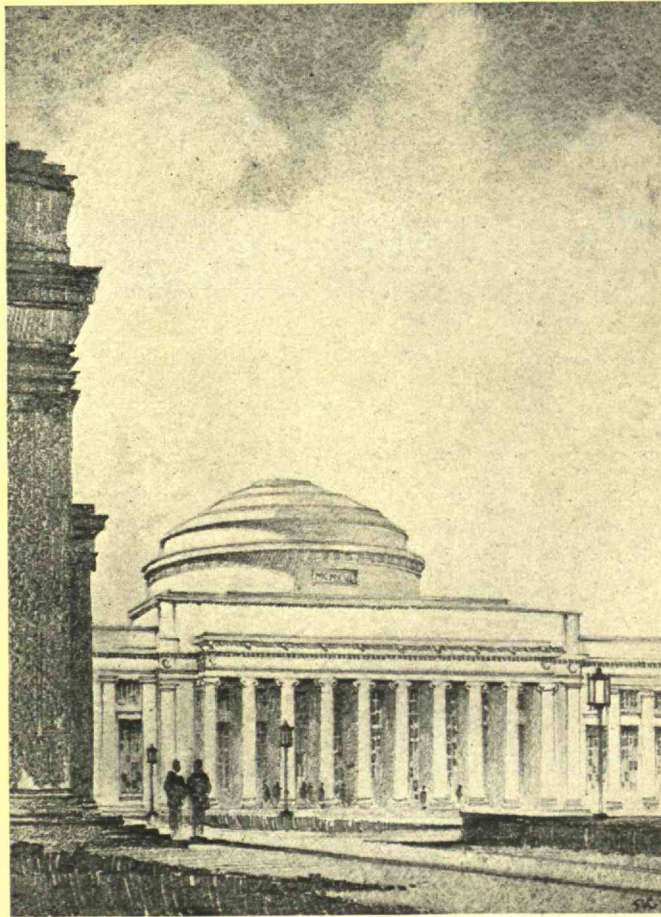


THE TECHNOLOGY REVIEW



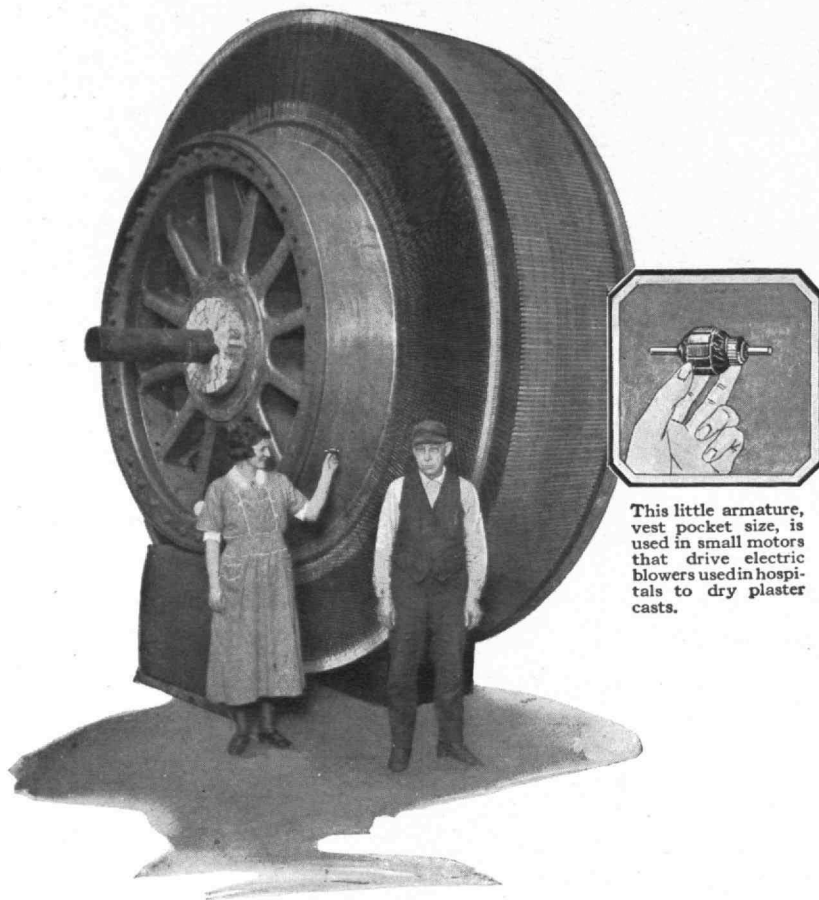
NOVEMBER
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RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

technology review

Published by MIT

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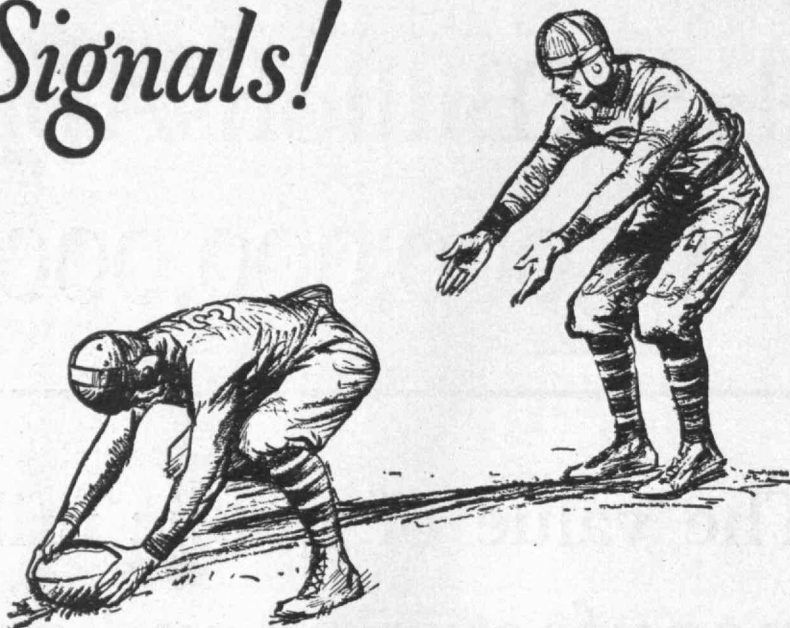
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*One of a series of announcements appearing in
student publications and aimed to interpret to under-
graduates their present and future opportunities.*

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS
INSTITUTE OF TECHNOLOGY

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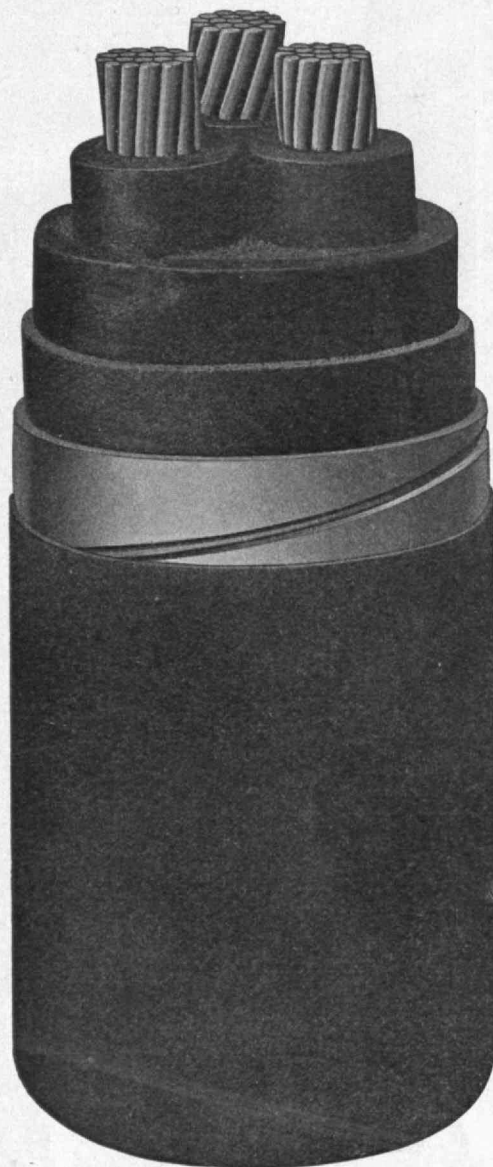
ORVILLE B. DENISON, '11, *Secretary-Treasurer*

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The TECHNOLOGY REVIEW

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VOLUME XXVIII

NOVEMBER, 1925

NUMBER 1

The Past Months

TECHNOLOGY is again operating on the semester system, which seems to please the majority of students and Faculty and to offer distinct advantages over the three-term plan which had been in effect since 1918. The discarded plan was adopted in some courses during the visitation of the Student Army Training Corps and, in 1918, was made effective in all courses. The vote of the Faculty to return to the semester arrangement is in accord with the action of a number of other colleges which, having tried the three-term system turned again, sooner than Technology, to the more orderly pre-war two-term arrangement.

The semester system means that the academic year is once more divided into two periods of ninety working days in which students and members of the Faculty are alike afforded the opportunity to become better acquainted. There will be less loss of time during the school year such as was consequent on three registration periods, with all their pains; three examination times, with all their anguish.

Because of the well-ordered system in the various departments of the Institute there was little or no confusion in returning to the old system. Minor adjustments only were necessary to synchronize the various units of the academic machinery and, once students had grasped the simple details of checking over the numbers of their subjects, things moved along smoothly. That *bête noire*, the repeater of subjects, was the fly in the ointment. If he flunked two terms on a three-term basis what, under a two-term basis, should be his expiation?

The answers did not appear in the back of the book, much to the chagrin of several registration officers.

REGISTRATION this year is again less than the year before. On October 11, 169 fewer students were recorded on the rolls than in fall of 1924. Now there are 2753; on October 11, 1924, there were 2922. All undergraduate classes number less except the seniors of whom there are 671. One year ago the class of 1925 had exactly this number. In spite of the drop of 5.8 per cent in the total registration, graduate students have increased 42 and now total 319, a gain of 15.2 per cent.

Two departments, Architecture and Electrical Engineering have made material gains. The former jumped 13.6 per cent by adding 26 students, all undergraduates. The regular course in Electrical Engineering increased 8.4 per cent by adding 36, half of whom are graduate students. The communications option, known as "Course VI-C" gained 11 juniors, lost 2 seniors, a net rise of forty-five per cent over last year. The coöperative courses under the Electrical Engineering Department did not fare so well. They dropped by 15 men, 6.6 per cent. Minor gains of two students are recorded in the courses in Sanitary Science and Biology and Public Health. The Department of Physics like the senior class remains unchanged. All other courses and departments decreased except the new Gas and Fuel course into which two pioneer registrants have ventured.

In detail the undergraduate classes are now: freshmen, 501; sophomores, 587; juniors, 648; seniors, 671;



From a woodcut by Kenneth Reid, '18

CHARLES M. SPOFFORD, '93

Head of the Department of Civil and Sanitary Engineering and this year Chairman of the Faculty



FIFTY YEARS AFTER

The Class of 1875 celebrated its Golden Jubilee at South Orleans, Mass., last June. Here they are from left to right: standing; W. A. Prentiss, S. J. Mixer, George Bowers, W. E. Nickerson, J. W. Homer, John Cabot, E. A. W. Hammatt, Wilfred Lewis, E. H. Lincoln. Sitting; C. W. Goodale, Thomas Hibbard, G. W. Lewis, E. S. Dorr, Frank Lyman

unclassified 27. Last year the corresponding figures were respectively: 576, 644, 702, 671, 52. In point of registration the five leading departments are this year: 1. Electrical Engineering, 704; 2. Mechanical Engineering, 371; 3. Engineering Administration, 364; 4. Civil and Sanitary Engineering, 308; 5. Chemical Engineering, 286.

Foreign students are also less than last year. Forty-four countries are represented by 189 men and one woman. The Institute's first Chinese co-ed is Miss Fu Li Kuan of Canton, who thus holds the enviable position of pioneer among women students come to Technology from overseas.

OF breath-taking unexpectedness and princely generosity, the gift of George Eastman, announced on the evening of December 8, will benefit Technology to the minimum amount of four and one-half million dollars." So said The Technology Review for January, 1925.

Said Mr. Eastman's statement printed in that issue: "I have sold certain stocks at less than their market value (the price being payable in installments during my life), with the intention of benefiting such institutions to the amount of at least \$15,000,000."

At that time the conservatism of these statements and their true significance was not appreciated by others than Mr. Eastman, his associates, a few

officials of Technology and the other institutions involved.

The annual report of Treasurer Everett Morss, '85, submitted at the October meeting of the Corporation sheds more light. All announcements heretofore spoke of the *minimum* amount expected. It now transpires that Technology has already benefited to the extent of \$5,146,053.90 and it is decidedly probable that it may eventually receive a maximum amount of about nine million dollars.

Here is what took place. In December, 1924, Mr. Eastman entered into a contract with the Institute, under which he turned over to it cash and securities valued at \$9,054,282.86. The agreement was that the Institute would purchase these securities from him for \$4,500,000, paying for them in semi-annual installments spread over fifteen years. This gave Technology an immediate clear balance of \$4,554,282.86. Between that time and June 30, 1925, the end of the fiscal year covered by the report of Mr. Morss, three things happened: (1) the Institute received an income from these investments of \$244,532.32; (2) the Institute profited a net of \$347,238.72 by selling some of the securities at figures above their book value; (3) the Institute paid Mr. Eastman \$150,000 as the first installment. On June 30, therefore, Mr. Eastman was a creditor of Technology to the amount of \$4,350,000 and the Institute had an

equity of \$5,146,053.90 in the securities it bought from him.

Largely because of this contract with Mr. Eastman the endowment assets of Technology increased 59.85 per cent during the past year. They are now \$27,477,773.19.

NOTWITHSTANDING this increase in prosperity the Institute spent but 1.4 per cent more than last year. It cost about \$6800 per day to run Technology, total outgo being \$2,481,015.62, roughly \$845 per student. Ten years ago it was only \$373. The bulk of the expense was for academic instruction, 48.5 per cent; plant operation required 15.2 per cent; administration swallowed up 9.9 per cent.

Distributing the amount spent for academic instruction which includes salaries of teachers and departmental expenses accessory to actual instruction, on a per student basis, gives \$410 per annum. Similar figures for the amount contributed by each student in the shape of tuition and fees demonstrates that Technology receives from this source about \$335 per student. Thus in order to pay fully for his instruction each of the 2938 undergraduates who were included in Registrar MacKinnon's nose-count of November 1, 1924, would have had to chip in \$75. If any of them had wanted to pay enough to cover his whole cost, exclusive of depreciation on the plant, he would have been relieved of \$510 besides his tuition.

Total income for the year was roughly two and a half millions; 38.9 per cent of it came from student fees and tuition, 55.3 per cent from invested funds, 0.9 per cent from U. S. government grants, 4.9 per cent from other sources. This is the first year, except for the abnormal war

year 1917-18, that less than fifty per cent of the Institute's income came from students. Forty years ago eighty per cent came from that source.

Sixty-two pages comprise the report and sixty of these are statistical. A careful inspection gives some insight into the huge task of operating the Technology plant. Coal cost \$81,783.50, on the average \$224.64 for each day of the fiscal year. There are 80,000 square feet of window glass, most of it plate. For each registered student \$2.80 was spent to scrub and polish it. Telephone service was expensive and cost \$4.18 per student, ice water 32 cents. The former will come higher next year. The Civil Engineering Summer Camp operated at a net expense of \$15,199.76 of which \$5,306.10 went for new construction and repairs; the Mining Engineering Camp at

Dover, N. J. took \$3,861.56. The net income from the dormitories was nearly \$10,000, and the labors of Superintendent A. H. Bridges enabled the Institute to stow away \$7,710.29 more in the Walker Memorial Dining Service reserve fund.

Schedule H, pages 22 to 51 inclusive, lists in detail bonds, stocks, mortgages and other coffee content. Nearly eighty-four per cent of the twenty-seven odd million dollars is entrusted to five classes of investments: 28.6 per cent to public utility bonds, 19.2 per cent to railroad bonds, 16.4 per cent to industrial stocks, 10.4 per cent to government and municipal bonds, 9.3 per cent to industrial bonds.

THESE past months have witnessed more of the inevitable changes that mark the passing of time. There have been appointments and promotions, readjustments and retirements in the Faculty. Since previous recording there have



THE NEW CLEVELAND TERMINAL BUILDING

A model of the new structure now being erected under the supervision of H. D. Fouett, '00, as Chief Engineer. Those who had ever occasion to travel to Cleveland in the old days will realize the magnitude of his good work. Associated with him are some six other Technology men. The tower above the public square entrance will rise for fifty stories, falling short of the Woolworth Building's height by barely eighty feet

been goings and comings, new faces, and the passing of familiar figures into other fields, some to the well-earned rest of retirement.

F. Jewett Moore, Professor of Organic Chemistry, has retired from active teaching after 31 years of service to devote himself exclusively to research. His successor in the difficult task of undergraduate instruction is Samuel P. Mulliken, '87, Professor of Organic Chemical Research, who in the change becomes head of the division of organic chemistry.

Another change in the Department of Chemistry is the retirement from active duty of Henry Fay, Professor of Analytical Chemistry and Metallography, whose work will henceforth be carried on by his close associate in the department Dr. Robert S. Williams, '02, Professor of Analytical Chemistry and Metallography.

Professor Moore was graduated from Amherst and later went to Germany and received his doctorate at Heidelberg in 1883. He taught at Cornell upon his return from Europe and came to Technology after a brief stay there. He was appointed professor in 1912.

Lawrence B. Chapman, '10, comes from Lehigh University to the post of Associate Professor in the Department of Naval Architecture. There he will have an active part in the design of a new naval tank which is in prospect for construction next year. While plans for the tank are still in a nebulous stage of development, it is expected to have a length of at least 500 feet, with a probable width of twenty feet and a depth of ten feet. The tank will be used for original research in naval architecture and to test the floats of seaplanes.

It is expected that it will be possible to attain a speed of thirty miles an hour with ship models in a tank of the proportions outlined.

In addition to two years as Assistant Professor of Mechanical Engineering at the University of Maine and six years at Lehigh, Professor Chapman has had seven years of professional experience.

In its July issue The Review had the pleasure of announcing as an addition to the staff Herbert Bristol Dwight, formerly director of design of rotating machinery in the Canadian Westinghouse Company. He is now active in the Department of Electrical Engineering as Professor of Electrical Machinery.

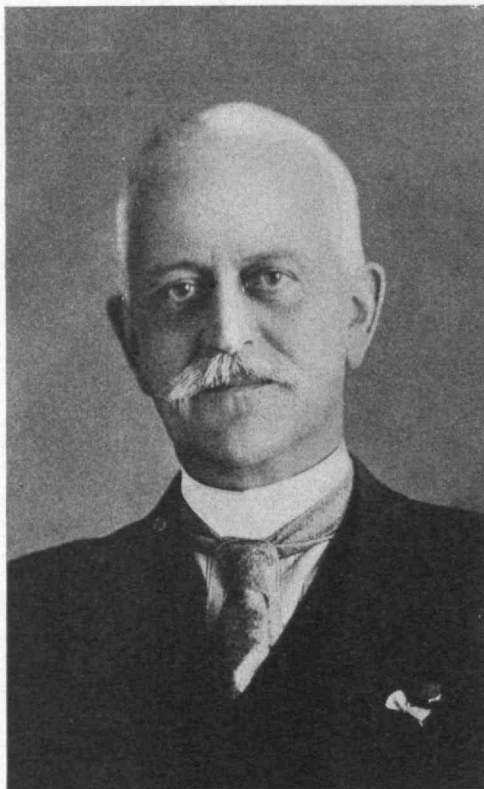
Later news announcing the appointment of Dr. Charles Tertzaghi, until recently acting head of the Department of Civil Engineering in Roberts College, Constantinople, as a Special Lecturer and Research Associate in the Department of Civil Engineering. He

is giving a course in earthworks engineering on which he is acknowledged to be a leading authority.

Dr. Tertzaghi is Czech engineer of long experience and a graduate of the University of Gratz. He was at one time Professor of Foundation Engineering in the Turkish Engineering University at Constantinople, a post he relinquished to go to Roberts College. He is the author of a volume on the subject of soil mechanics and has contributed numerous articles to engineering journals.

J. W. Barker, '16, who received his Master of Science Degree in Electrical Engineering last June, was recently appointed an Associate Professor in the Department of Electrical Engineering. He has been an officer in the United States Coast Artillery Corps for nine years and received his commission as a major while in foreign service in the World War. He was sometime Assistant Adjutant-General of the District of Paris and later stationed on the Rhine with the A. F. in G.

H. T. Mann has been appointed a special lecturer in the Department of Mining, Metallurgy and Geology to carry on the work of Professor W. Spencer Hutchinson, '92, who is on leave of absence.



CHARLES W. EATON, '85
*Benefactor of Technology in death as well as life,
Mr. Eaton left to the Institute a sum now estimated
at \$200,000. See the story on page 11*

PROFESSOR Th. de Donder of the University of Brussels, and Professor Max Born of University of Gottingen come to the Institute this year to give a series of lectures under the joint auspices of the Commission for the Relief of Belgium Educational Foundation and Technology.

The lectures by Professor Born will begin late this month, continuing for ten weeks. There will

be two separate series, one on the subject of "Theory in Atomic Structure" and the other on the "Theory of Crystal Gratings."

Professor Born is one of the foremost theoretical physicists, his outstanding work being the development of quantum mechanics. He is also widely known for his theoretical work on crystal gratings.

"Theory of Relativity" and the "Mathematical Theory of Electricity" will be the subjects of Professor de Donder's lectures, which will come in the second semester. He is well known for his contributions on the Einstein Theory of Relativity, and his treatise on "*La Gravifique Einsteinienne*" represents the first attempt to develop the world's mechanics on the basis of the Einstein theory. Professor de Donder is also the author of a recent treatise on the mathematical theory of electricity, a work considered by several well-known physicists as an outstanding contribution in that field.

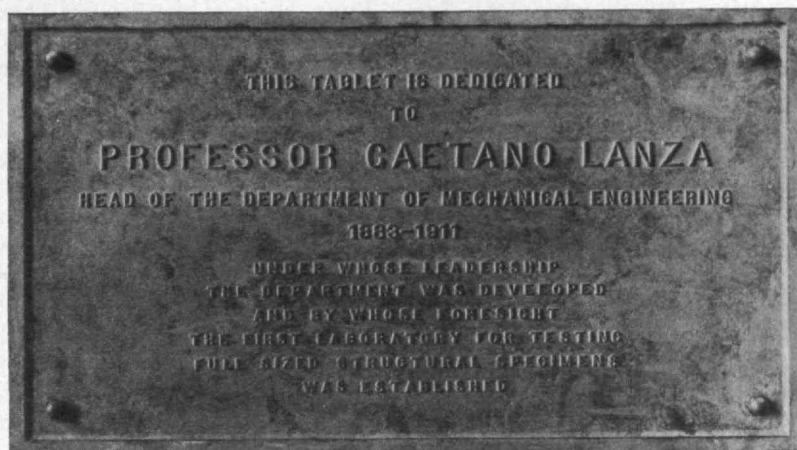
The lectures, it is announced, will be open to all who are interested, and may be attended without registration.

THE Department of Electrical Engineering is making a significant experiment in offering to a small group of students of high standing the opportunity to complete their course and secure a degree under conditions of more freedom than is characteristic of the regular curriculum.

The object of the plan, according to Professor Dugald C. Jackson, head of the Department, is to encourage a scholarly attitude toward scientific and economic studies and to enlarge the opportunities for breadth of knowledge and the exercise of vision, originality, initiative and resourcefulness. It is believed that the students who cultivate these qualities to the highest degrees will be the earliest to arrive at influential posts in the years after their graduation. That a coming genius invariably stands last in his class is not borne out by fact.

Juniors only are eligible for these special privileges, under which the men may decide for themselves whether or not they wish to attend certain classes or whether they wish to gain proficiency in the subjects by their own means in their own times. Regardless, they will be expected to pass the regular term examinations in common with others of their class. In the matter of home problems the selected students will be allowed to work out those which interest them most, giving special study to such problems as present new principles. The laboratory work, instead of a series of independent assignments, will consist of a general assignment relating to the subjects taught in each term. The plan provides for

what in effect is an undergraduate seminar group, membership in which will be recognition of special qualities for high attainment. The development of the plan will be watched with keen interest by educators.



TO PROFESSOR MILLER'S PREDECESSOR

Is dedicated this bronze plaque now in position near the entrance to Mechanical Engineering headquarters

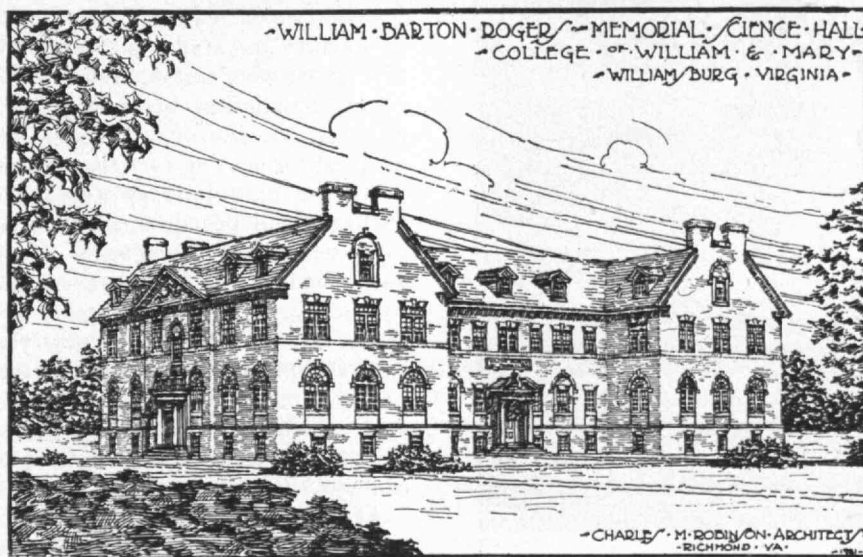
veritable museum of welding apparatus.

The work done by experts from various engineering firms and manufacturers of welding apparatus was a remarkable illustration of the progress of welding in recent years. Nowhere was this more clearly demonstrated than in a motion pictures of welding methods in the construction by the E. G. Budd Manufacturing Company of all-steel automobile bodies.

"Thermit Welding" was demonstrated by J. H. Deppeler, chief engineer of the Metal and Thermit Corporation, and A. W. Moulder, chief of the engineering staff of the Grinnell Company, showed what can be done by gas welding in power plant piping.

H. M. Hobart, chairman, and W. Spraragen, Secretary of the Electric Arc Welding Committee, read a joint paper on "Industrial Applications of Arc Welding and Economics Effected Through its Use."

Professor Elihu Thomson of the General Electric Company, and Life Member of the Corporation; Professor C. A. Adams, founder of the welding society and director of the American Bureau of Welding, and



THE ROGERS MEMORIAL

The College of William and Mary shows the way to the lagging Institute by this plan for a memorial to William Barton Rogers, student and teacher at the Virginia institution. The Science Hall is designed for immediate erection. See page 15

NEARLY 1,000 engineers, all interested in welding methods, spent three days at the Institute in October watching carbon pencils scribble in white fire and blue gas flames eat their way through metal. It was the fall meeting of the American Welding Society and the hydraulics laboratory in which the demonstrations were given was a

Professor A. S. Kinsey of Stevens Institute of Technology, were the principal speakers at the society's dinner at which Professor Edward S. Miller, '86, Head of the Department of Mechanical Engineering, was Technology's official representative.

ATTENDANCE at the Summer Session of the Institute this year was the largest in the history of the school. Sixteen hundred and eight students, a ten per cent increase over last year, registered for the various courses.

The increase was due almost entirely, Professor Edward F. Miller, '86, Director of the Summer Session, pointed out, to increased enrollment of secondary school teachers for the courses in methods of teaching high school physics, chemistry and general science. There were 154 of these teachers, three times as many as last year. Enthusiasm for their studies at the Institute took tangible and permanent form in a joint letter of appreciation to the Director.

Walter F. Downey, Head Master of the Boston English High School, gave two courses in methods of teaching junior and senior high school mathematics, which included study of class-room technique and demonstrations with a class of high school students, under the direction of Miss Olive A. Kee of the Boston

Teachers' College. These courses were listed as regular electives in the Department of Mathematics of the Institute and were accepted as 120 hours credit toward a Bachelor's or Master's degree. A course in methods of teaching general science was directed by Joseph R. Lunt, Head of the Science Department of the Boston Mechanic Arts High School.

In addition to those taking the courses for teachers, the registration included 1159 students of which 449 had not previously been registered as Institute students. Attendance at the Summer Surveying Camp at East Machias this year was ninety as against eighty-six last year.

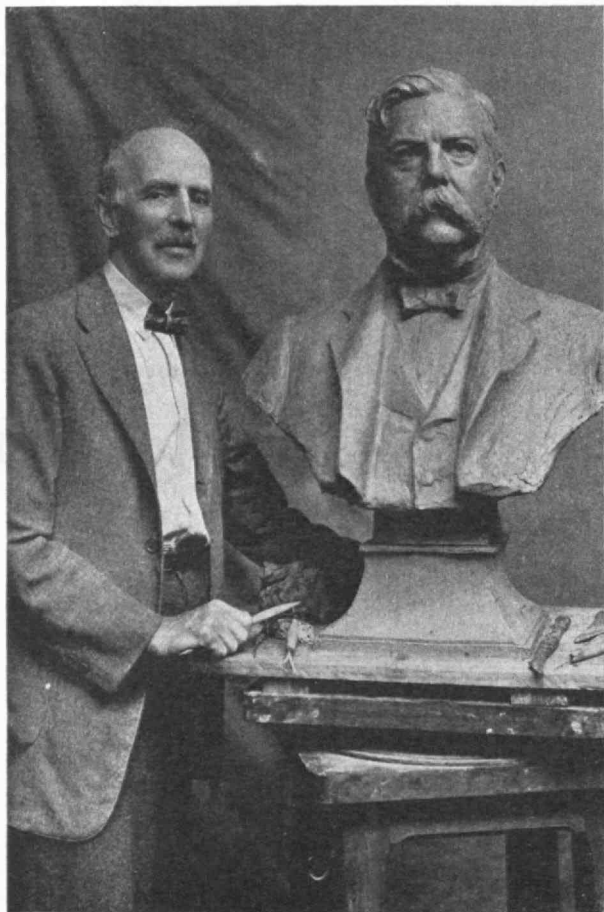
WHILE the summer session's instructing staff was busy teaching teachers how to teach high school physics and general science, the Department of Buildings and Power, of which Major Albert S. Smith is the symbol, utilized the summer days to make various changes and improvements about the grounds and buildings. A crew of agriculturists made grass grow where only cinders grew before; others sprayed paint on the walls of various rooms and corridors, while still another group retiled the serving room of the Walker dining hall so effectively that new students gasp at the low prices for food.

There is already enough greensward about the Institute to make the man who cuts his own sick at heart when he thinks of the push-per-hour necessary to keep it in order. He forgets the task is accomplished with motor-mowers. However, Major Smith discovered a spot on which to grow more grass and now, although the leaves are falling in a gold and crimson avalanche, there is a strip of tender green on the Massachusetts Avenue side of the grounds between the Naval Architecture building and Vassar Street.

It was not until the affair was almost completed that curious spectators learned the object of construction going on directly behind the dome. It is not a new hockey rink nor an Imhoff tank, but new parking space for the ever-increasing fleet of gasoline transports used by Faculty and students to come to Tech. It is rumored that exhaustive tests convinced Major Smith that the cinder foundation in that particular section of the grounds, the site of last year's hockey rink, is better adapted for holding cars than water.

By the time January's cold, dark days arrive the Institute will be equipped with a new 1250 kilowatt turbo-generator, installation of which was recently authorized by the Corporation. The unit is being built by the Westinghouse Company and is expected to be ready for use early in the new year. The demand for light and power on holidays and on winter evenings led to the purchase of a small 30 kilowatt motor-generator unit, which will take care of the needs when the load is light. The smallest unit in the power plant at present is a 150 kilowatt generator.

The changes in Walker Memorial include replacement of the granolithic floors in the serving room with tile, which was also applied to the walls to a height of six feet. A new automatic refrigerator has been installed, and the ventilating fans have been equipped with air filters.



Underwood Photo

DANIEL CHESTER FRENCH, '71

Sculptor, among many famous works, of the Lincoln Memorial statue is here shown posing beside the bust of George Westinghouse recently completed on commission from the American Society of Mechanical Engineers

During these past months thirty barrels of paint, approximately 1500 gallons, were applied to buildings in the educational group. Mechanical equipment was used and the work was carried out by a crew of six men, who accomplished more in less time than under the old brush system of painting.

The Analytical Chemistry laboratory, Room 2-310, has been divided by two partitions to obviate a bad feature of original design which made the room (and the one below it, yet unchanged) a thoroughfare as well as a laboratory. Now the desks and hoods are isolated from the center pathway by a double septum of lath and plaster. New sinks and steam baths were added during the alterations.

Two new concrete tennis courts have been built on the land west of Massachusetts Avenue and if appearances count they are everything they should be. The concrete was laid on a foundation of cinders four feet deep and raised above the surrounding land for drainage purposes. What effect, if any, the low temperatures of a New England winter will have on the courts is a question that can be answered only when the winds bring their burden of ice and snow.

It was thus a summer of plentiful labor for the industrious Major. The Institute is keeping up appearances and the summer passes with but one regret. Blasting hopes and rumors no order came from the high command to send the Major tearing into the gravel of Eastman Court, to conquer it and make it bloom as the rose. There is no change.

THE light of far-flung glory falls upon the Departments of Chemistry and Chemical Engineering as a result of high honors bestowed upon two members of the Faculty.

The Royal Institution, one of England's oldest and most revered, halted Professor James F. Norris, during his recent journey through Europe as President of the American Chemical Society, long enough to present him with a certificate of honorary membership.

Professor Norris returned in time to attend the 204th meeting of the Northeastern Section of the American Chemical Society on October 6 at the Institute. The speaker on that occasion was Professor Alexander Findlay of the University College of Wales, who spoke on "The Appeal of Science to the Community" to 800 members of the Society.

Professor Norris at the next meeting on November

13 will give an account of his European trip, the subject of an interesting article by him in this issue of The Review.

And Dr. Warren K. Lewis, '05, Head of the Department of Chemical Engineering was made an honorary member of the British Institution of Chemical Engineers, one of a small distinguished group, be it added, during a visit to England last summer. The honor cited his notable achievements in chemical engineering in the United States.



HERBERT BRISTOL DWIGHT

New Professor of Electrical Machinery, who comes to the Institute from the Westinghouse Electric Company, where he was designer of rotating electrical machinery. See the story on page 8

THOUGHTFUL always of Technology in life, Charles W. Eaton, '85, who died at Tacoma, Wash., in July, perpetuated his affection for his Alma Mater in a bequest which is expected to amount of \$250,000, when all provisions of his will have been executed.

Mr. Eaton's gifts to the Institute during his life were many, although few were aware of his generosity. He made possible the construction of the Instructors' barracks and the athletic field, now known as Eaton Field, at Camp Technology in Maine, and took delight in personal supervision of the grading of the field.

Born in Haverhill, Mass., his profession carried him far abroad but he maintained a home there all his life. He attended Andover Academy and after completing his course in civil engineering at Technology, remained at the Institute as an

instructor in drawing from 1885 to 1890. He was also an instructor in Pratt Institute in New York for a few years before he took up professional work.

He specialized in marine construction and was commissioned by the government to build the harbor at San Juan, Porto Rico. While engaged in the work there it is related that native padrones stirred up trouble among Mr. Eaton's native workers and for a time it appeared as if the work could not be carried on. Mr. Eaton is said to have regained the loyalty of his employes by the simple expedient of distributing to them newly minted pennies. Appearing one day during the labor unrest with a huge bag of shining coins of lolly-pop purchasing power, he promised every laborer a penny for each load of earth removed from the scene of construction. Work was instantly resumed amid much excitement and the exchange of many bright pennies, and the padrones caused no further trouble.

Mr. Eaton also carried out extensive dredging operations in the Gulf of Mexico for the government, and for a number of years was engaged in harbor improvements

Undismayed by the growing burden of his years and barred for this reason from the Army Engineer Corps, Mr. Eaton, nevertheless, went to France during the World War and carried on Red Cross work, much of which he financed from his personal resources.

Retirement from his profession came soon after the death of Mrs. Eaton in 1917, and in the years following he traveled almost continuously in this country and abroad.

FRANCIS LEE HIGGINSON, distinguished banker, a man of many interests and wide friendships, and a member of the Corporation of the Institute from 1902 to 1917, died at his summer home near Boston in August, at the age of eighty-four years.

He was eighth in descent from the Rev. Francis Higginson, who came to America from England in the Seventeenth Century. Francis Lee Higginson was prepared for college in the famous old school conducted in Concord by Frank Sanborn. He entered Harvard with the class of '63, but soon left to serve in the Civil War as a lieutenant in the 54th Massachusetts Infantry. Later he was commissioned captain in the 5th Massachusetts Cavalry.

In 1866 Mr. Higginson entered the firm of Lee, Higginson & Company of which his brother, Major Henry L. Higginson, was head. He remained a member of the firm until 1884, when he retired from active participation in the business, although he was a director in many concerns for years afterwards. He was also president of the Suffolk Savings Bank for Seamen; of the Boston & Lowell Railroad; served as an overseer of Harvard College, and was a trustee of the Massachusetts General Hospital and the Massachusetts Humane Society.

TANGIBLE evidence of the regard of Technology men for Professor Emeritus Gaetano Lanza, Head of the Department of Mechanical Engineering from 1883 to 1911, is written in bronze on a tablet recently erected at the entrance to the department in the development of which he played such an active rôle. The tablet, which expresses the gratitude of the In-

stitute for Professor Lanza's years of service in which he raised his department to a standard unsurpassed at the time, was designed and cast by students under the direction of Professor Edward F. Miller, '86, now Head

of the Department, who himself applied the acid in finishing the surface of the bronze.

Many honors came to Professor Lanza in the years of his service. Italy created him Cavaliere delle Ordinedei Santa Maurizio Lazzaro in 1907. He is a fellow of the American Academy of Arts and Sciences, and a member of the Circole Matematico di Palermo, Società pel Progresso delle Scienze, American Society of Mechanical Engineers, Boston Society of Civil Engineers, American Mathematical Society, International Association for Testing Materials, the Mathematical and Physical Club, and the Franklin Institute.

PROFESSOR HENRY H. W. KEITH, '05, of the Department of Naval Architecture played an important rôle in the recent launching of the air-plane carrier *U. S. S. Lexington* at the plant of the Fore River Shipbuilding Company at Quincy, Mass.

The *Lexington* is said to be the longest and heaviest ship ever built in the United States, and the problem of getting the 27,000 ton craft

safely into the sea presented a problem new to American shipbuilders. Professor Keith was called upon to work out a system to allow her launching in a channel 1,500 feet wide, which was successfully accomplished through the use of ingenious tackle to impede the ship's progress down the ways.

The big ship's propellers were locked and a screen was built across her stern to offer resistance when she struck the water. But that was not all, for when the sole-piece was struck from the keel and the vessel began sliding down the ways, her progress was kept within prescribed rates by the picking up of heavy drag chains, piles of which had been placed on either side of the ship at several points along the ways. So well did the plan work that the *Lexington* was easily brought under control of a fleet of puffing tugs when she finally floated free on Fore River. She was towed to the company's

Twenty-five Years ago in The Review

Issue: October, 1900.

The studious reader of back files notes with interest the items which appealed to the news sense of The Review editors twenty-five years ago:

THE Beacon of Progress. The leading article called attention to the fact that the Paris Salon of 1900 had awarded the first medal in the Department of Architecture to Mr. Desiré Despradelle for a monument fifteen hundred feet high to be called The Beacon of Progress.

A RESUMÉ of President Pritchett's address to the Class of 1904, delivered on December 26, 1900. He said, "Among the considerations which influenced me to come to the Institute was my belief in the growing importance of engineering education. . . . My office will stand open much of the time. I believe in the open-door policy. Whenever you wish to consult me in regard to any subject do not hesitate to come."

A REPORT of the two hundred and eighty-third meeting of the Corporation on June 1, 1900. The degree of Bachelor of Science was conferred on 178 graduates. Dr. Pritchett's letter of acceptance of the presidency of the Institute was read.

ARRANGEMENTS for the ceremony of President Pritchett's inauguration. Of the Corporation, Messrs. Wheeler, Wigglesworth, and Williams were appointed a sub-committee, and Professors Runkle, Swain, Bates and Tyler an Auxiliary Faculty Committee. Mr. Munroe was added to the Joint Committee. It was determined that the inaugural exercises be held on Wednesday, October 24, 1900, at 2 o'clock in Symphony Hall. The program was to include an invocation by Bishop Lawrence. A reception in the library of the Rogers Building was announced to follow.

CHANGES in the faculty and instructing staff. Associate Professor Pope was appointed Professor of Chemistry. Assistant Professors Vogel, Woodbridge and Ripley were advanced to the grade of Associate Professors. Professor Webster Wells was granted a year's leave of absence for a tour of Europe, Egypt and Palestine. Dr. William H. Walker resigned his instructorship in Analytical Chemistry to accept a professional engagement. Mr. Harry W. Gardner resumed his work as an instructor in Architecture after a year's absence. Chemistry Instructors Blanchard and Sherrill went to Leipsig for advanced studies. Messrs. George L. Hosmer, Alpheus G. Woodman, and Joseph C. Riley, previously assistants, became instructors. Dr. William D. Coolidge was appointed instructor in Theoretical Chemistry. New assistants appointed were E. E. Bugbee in Mining Engineering, L. S. Smith in Mechanical Engineering, and G. E. Russell in Civil Engineering.

docks where she will remain for at least a year for fitting out.

BOSTON'S forthcoming mayoral election, quadrennial affront to those who still insist Boston is a center of art and culture, held a ray of hope that there may come a day when the city will elect a mayor above the level of professional politicians.

That hope lay in the candidacy of Miss Frances G. Curtis, '98, the only woman in a field of more than a score of gentlemen, each of whom in the broad talk of politicians is as good as seated in the red plush chair of state. She failed, however, to obtain the necessary signatures to her nomination papers.

Aside from the obvious qualifications of a broad education, Miss Curtis specialized in sanitary engineering at the Institute in 1897-98. That alone, loyal readers will say, was sufficient argument for electing her mayor of Boston. She studied political economy at Radcliffe when that institution basked even more serenely than now in the shadow of Harvard, and learned much of art as a student in the Boston Museum of Fine Arts. In the years between Miss Curtis has been active. She served for a number of years on the Massachusetts State Board of Charities, and has been the only woman member of the Boston school committee for thirteen years.

Few, probably Miss Curtis least of all, expected her election. But it is a good sign to see one of Miss Curtis' character walk unafraid into Boston's political bull

fighting arena, where most of the toreadors ride donkeys in a cloud of yellow dust.

ADMINISTRATION of the estate of the 1925 All-Technology Reunion revealed a net deficit of \$2003.20, not listing the Zizz film as a quick asset. Probate was accomplished, funeral expenses were contributed by a "guaranty fund", accounts closed.

Of the five program events, three paid more than their own way: the Luncheon on June 11, the Jamboree Dinner, the Pops. No charge was made for the President's Tea and the Harbor Outing incurred a deficit, since an overflow crowd made imperative an extra boat carrying but a fraction of its capacity.

Publicity, mostly *Boomerang* expense, and registration, comprised a general overhead of \$4741.93, or just under two dollars for each Alumnus or guest registered.

In detail the receipts and expenses were:

	Receipts	Expenses	Net
Publicity.....	.....	\$3,992.15	\$3,992.15*
Registration.....	.....	749.78	749.78*
Lunch.....	\$1,168.50	720.00	448.50
Tea.....	.....	1,512.00	1,512.00*
Jamboree.....	13,483.00	10,209.63	3,273.37
Outing.....	9,942.00	10,413.27	471.27*
Pops.....	2,714.50	1,714.37	1,000.13
Guaranty Fund.....	2,003.20	.....	2,003.20
Totals.....	\$29,311.20	\$29,311.20	

* Deficit



VISITORS TO THE INSTITUTE

Keystone View Photo

Rancors forgotten, these forty-odd German students visited Technology in mid-October, expressing much interest in its methods, its equipment. The visit was in course of a technological tour

KAOLIN, a valuable clay used in coating paper, has been discovered on a farm in the Green Mountains near Bennington, Vermont. The deposit, which was examined for the owners by Professor William F. Jones, '09, Assistant Professor of Structural Geology in the Department of Mining, Metallurgy and Geology, is expected to yield more than 1,000,000 tons of clay superior in quality to that now being used in the manufacture of paper.

The deposit has an average depth of twelve feet and lies two miles from Bennington in a valley a mile and a half long. Clay from this valley was used by the potters of the village as early as 1851, when the manufacture of pottery was one of the leading industries of the town. It was not until recently, however, that the true value of the deposit was revealed.

"The clay," Professor Jones said in his report, "contains a surprisingly small amount of grit or sand. The separation of clay and grit by machine methods will be simple owing to texture, without any considerable loss."

Editorial Comment

Mournful Numbers

For the fourth successive year the undergraduate registration of the Institute has declined from the figure of the year immediately preceding, and those interested in educational statistics are beginning now upon the search for an explanation to take the place of the previous glib formula neatly labelled as "post-war reaction." It was a good stencil while it lasted.

Survey seems to show that a drop in student attendance following the war has been largely confined to technical schools. It is not possible to speak with complete authority on the vicissitudes through which the country's medical, law and other professional schools may have gone since the extraordinary boom years that immediately followed the war, but whatever fluctuations they may have experienced were at least not so spectacular as those of the schools who are engaged in training the country's engineers. Of the fortunes of the college of liberal arts, and of the large universities containing a variety of schools, there is no need for enlightenment. Despite some wise prophecies of decrease they have waxed fat and increased with a slow remorselessness that is almost terrifying.

This disparity is cause for a number of interesting reflections. Five years ago, when the acceleration in college numbers had reached its utmost point, there was heard everywhere the prediction that another year would bring reaction with it, and that registrations would drop and keep on dropping until the curve reached the projection of the point established by the average pre-war rate of growth. When the next year came, there was a keen watch on the number of entrants and much speculation as to first and second derivatives. Being mathematically minded, Technology, in common with every other noteworthy technical school in the country, began on the process promptly, and has not yet come to the end of it.

But except in the technical schools the expected did not occur. It thus comes about that there is not much glory in the result for the statisticians (who can have no good idea of where or how the impulsion to a college career arises) nor yet to the technical schools, which showed themselves to be the most nervously reactive to the capricious economics of the day. The war was five years over: therefore interest in physics, mathematics and chemistry waned; equally therefore, interest in botany, music and Coptic continued to increase. Why?

Because, we venture to answer, the chickens of indiscriminateness came home to roost.

The war, to deal in common stock and stencil for a moment, had been conducted by this country on a pattern to bring sharply into the foreground the many, varied and extraordinary achievements of science, pure and applied. The tank was a marvel of mechanics. Mustard gas was an esoteric horror showing the advisability of staying on the right side of chemists. The opinion, nurtured on the natural war time instinct to jettison anything not immediately productive of material accomplishment, grew by leaps and bounds, that a technical education was to be the one means to salvation in the vastly altered civilization that was to emerge from the war.

No one with his eyes open can but say he saw it coming. And it came. The mass of students seeking the new salvation struck the technical schools in a flood, in the fall of 1919. Technology's registration jumped from 1819 students to 3078, an increase, overnight, so to speak, of almost 60 per cent. The result was a pleasant chaos—a chaos such as a manufactory might experience on receipt of a million dollar order for delivery in three months. It was stimulating to be augmented sixty per cent in size, importance, prestige, appreciation.

Now it is notorious that in this wave which struck Technology and its sister institutions, there was a good deal of flotsam, and more than that of jetsam. In other words, the sixty per cent augmentation was not composed of students sixty per cent better than the average. In the inevitable stress of selection the filters had somehow clogged and overflowed. Technology had on its hands, in all frankness, more undesirables (both in numbers and percentage) than she was accustomed to. Very well, it could not have been helped. Conditions had been extraordinary, and although they had been to some extent foreseen, there was nothing else for the technical schools to do but grin and bear it.

They did. So did non-technical colleges and universities in the same swamped situation. The one difference was that the universities, being, of their nature, older and (let us not hesitate) wiser institutions soon set to the mending of their fences. They had seen these surges before, and knew what they were worth and how they should be dealt with. The result was that restrictions, other than the passing of routine examinations, began to hedge entrance to many universities. To the disappointment of many, the technical schools, well content with their new place in the sun, sought to place no curb upon the mounting numbers. The result was that in 1920, the Institute's enrollment reached 3436, and one

year later, 3505. Fifteen hundred and fifty additional students in two years time!

But of the fifteen hundred and fifty, measurably less than the whole were destined to become Whitneys, Freemans, Walkers, Hales. Like every other school Technology had admitted a number of manifest unfits, some of whom did not finally disappear until they had wasted two years of their time, their teachers', and several thousands of the Institute's contributed income. After that, with the memory of two bitter and wasted years behind them, they dropped from sight, to spread the gospel that an engineering education was not what it was cracked up to be.

It is thus, perhaps, that the fad for scientific education is passing. Obviously, there is no regret for the technical schools in the situation, *per se*—it was a fad built upon romances and not a conviction founded on fact. A training in science and technology is a splendid thing, but it is not to be bought like so much merchandise. Qualifications are entailed upon the recipient which it is not easy to make him meet in the situation of an unrestricted, open door policy of admissions.

Technology has today fewer students than she has had at any time since 1918. This, in itself, is no bad thing. The registration this year is close to ideal, so far as capacity of buildings and numbers on the staff will measure it. The previous years were a strain from which it is well to be relieved. But there is one feature to the registration numbers this year which still remains alarming. Once again the Institute admitted, without reference to its own optimum number, precisely as many as passed the routine examinations and wanted to come. We have passed from the days of a fifteen hundred and fifty increase to an eight hundred decrease, with not much more policy on admissions than in the days before the war.

It may seem like a curious twist of argument to suggest that the now belated beginnings of such a policy must first wait for an increase in applications for admission, yet the fact is fairly obvious. The Institute has at the present time students which in number are approximately correct. Their quality can be increased at the source only, and increased here by no process other than the selection of the same number of successful applicants from a larger stock of raw material.

The immediate problem for the Institute is thus twofold: first, how may the number of applicants be increased in number; second, how may the increased numbers be selected with more intelligence? The second is a question of faculty policy, but the first is a task upon which an immediately augmented alumni consciousness could do an extraordinary good.

Excuses will not meet the situation. It has been suggested that numbers have decreased because we have insufficient dormitory facilities. We have more than we had five years ago. It has been suggested that we have no large scale Varsity athletics to interest prospective students. But Institute athletics were never so much to the fore as now. Such explanations are not only false, but would be beside the point if they were true. The real explanation lies in the fact, difficult and unpleasant to face, that we have been and are insufficiently concerned with the problem of writing the specifications

for a good student of technology. If ever there were a school which should be in the van of a movement for the intelligent study of this problem, it is the Institute. Our failure has cost us much time and some prestige. The moment is ripe for the retrieving of our lost ground by a concerted action of Institute and Alumni.

A Rogers Memorial

Harvard University in New England and the College of William and Mary in Virginia were, in colonial days, parallel forces in the training of great leaders. From the latter institution came such nation-builders as Washington, Jefferson, Monroe, Tyler, Marshall and the Randolphs. In addition, this small college has given to the Country thirteen cabinet officers, twenty-nine senators, three speakers of the House, two ministers to England, four to France, and twelve to other countries.

Founded in 1693, William and Mary is, next to Harvard, the oldest college in the United States. The histories of the two institutions have been, however, quite different. While Harvard has gone steadily forward, the Civil War brought the Virginia college to a temporary standstill, its students having all enlisted and its buildings having been practically destroyed by Union troops. Its charter was kept alive by its then president, Colonel Ewell, who saw to it that the chapel bell should be rung and the doors opened to summon students who, for seven years, never came. Not long after the War, the college was reopened through assistance from the Federal government, and, under its present President, Dr. Chandler, it is making extraordinary progress both in numbers and in resources.

A fact which particularly interests Technology men is that, at William and Mary, were educated the four distinguished sons of Patrick Kerr Rogers. To them the notable development of pure and applied science in America during the nineteenth century was in large measure due. The foremost of these brothers was William Barton Rogers, Founder of the Institute. Many of the best ideas in his "Plan" for the new institution, — a plan under which we are still functioning, — had their origin in his experience as professor of natural science in the Virginia college.

It is therefore highly appropriate that, among the many new buildings which William and Mary has erected, or is to put up, is a William Barton Rogers Memorial Science Hall which will house the now scattered departments of chemistry, physics, biology, etc. The College does not purpose establishing a school of engineering, but has so affiliated with Northern colleges of technology, particularly with the Institute itself that those of its graduates who wish to follow pure and applied science will be transferred, after graduation at William and Mary, to them.

When the idea of the Rogers Memorial was first broached, the following consented to serve as an advisory committee: Coleman duPont, '84, Charles W. Eliot, Samuel M. Felton, '73, Francis R. Hart, '89, Charles Hayden, '90, Otto H. Kahn, Hugh McRae, '85, E. H. Moore, James P. Munroe, '82, Henry S. Pritchett, Charles A. Stone, '88, Gerard Swope, '95, Elihu Thomson, Charles D. Walcott and Edwin S. Webster, '88. Both the physical and the academic plans of the

Memorial have been passed upon by the members of this Committee. A major part of the money needed for the Memorial has been contributed from sources outside the Institute; but it is highly desirable that the balance should be secured, if possible, by Technology men. The debt which we, and indeed all the people of the United States, owe to President Rogers is far beyond calculation; and no more appropriate memorial of the distinguished Founder of the Institute could be devised than this dignified building located at the College where he was trained and where he taught, — a building that, for generations to come, will be a substantial factor in that work of education to the furthering of which President Rogers gave his entire life.

My Lady vs. Nicotine

The Institute Committee, that wise young undergraduate governing body, deliberated earnestly some few days ago, studied the problem under consideration from the physical, ethical, moral, social, religious and aesthetic angles of view; debated on questions of legality, validity, advisability; sought to reach a conclusion by the chilly means of pure logic; prayed ardently for a revealed light to follow. There was quotation of statistics; there was frenzied and polemical appeal of oratory. Finally, there was the question and the vote. The affirmative had it.

Sanction was given to girls that they might smoke at, during, in or around dances given in the Walker Memorial Building.

Repercussions reached the front page of the *New York Times* next day, wherein it was declared that the decision shook every college tradition in New England. Citations were given to show with what direct contrariety the decision ripped into the established law and order. It was asserted that girls from Wellesley and Radcliffe would profit no whit from the new freedom so long as their own college code provided expulsion for the captured transgressor.

We are inclined to foresee, between the time these words are written and the time they see light, a considerable volume of editorial utterance, and good business for the clipping bureaus. Let it be so; we welcome it. It is a warming experience to awake and find oneself become an arbiter of social fashion over night. This experience has not come to the Institute since the days when it sought to rank 10 o'clock cocoa with 5 o'clock tea, and came so unhappily a social cropper. This latest promises better.

If we were to submit our own interpretation we should at once predict a sharp falling off in the consumption of tobacco by young ladies at dances. For one thing, it is hard to keep a cigarette between the lips when the jaw has dropped. For another, legalization has a notorious effect in taking a thrill out of almost anything. It is not to be supposed that the girls who have come to dances in Walker before the Rise of Tolerance went without an illicit puff for fear of the legal consequences, and the present sanction will thus make it unnecessary to hide as well as smoke, but have small effect other than that. The girl addicts will no more than experience the same sensations as would the rest of us if prohibition were repealed tomorrow.

None the less, if the Institute Committee will permit us, we should like to offer sincerest congratulations on a wisdom that some of their elders will never attain. It is the trend of the time to enact, not to repeal, oppressive legislation, and that the Committee should have had the courage as well as the good sense to go counter to custom is a matter for general rejoicing. A good many of us, by now thoroughly steeped in nicotine, are inclined to rate smoking an empty pleasure, to wonder how we started and why we persist. Somehow we did, and somehow we do, and it is surely not for us, in full admission of our frailty, to suggest that the right to smoke should be abridged on account of sex. We are glad that the Institute Committee has made Technology a tradition breaker. Boy! The cigar tray for the matrons!

Saluting Samuel Chamberlain

The opera Ruddigore found it in a book of etiquette, and set it forth to music:

You must not point —
You must not point —
It says it's out of joint
To point.

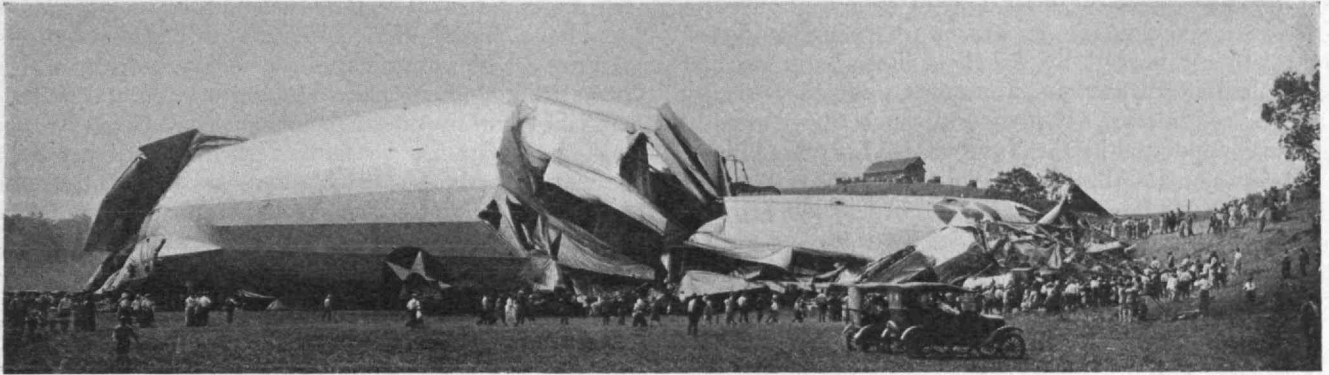
We are conquered by the authority, but we submit that we have a cause for pointing, and that if it is done with pride as we propose (justifiably, we hope you agree) to do it, the process is frequently condoned.

That disposed of, we would direct your best attention to the cover design which this month graces *The Review*. It is reproduced from one of a series of pencil sketches done for *The Review* by Samuel Chamberlain, '18, who will furnish throughout the year a set of varied designs, uniform only in their excellence.

Since young Sam Chamberlain left the Institute's Department of Architecture, leaving behind him a trail of escapades, anecdotes and envois, his fame as a worker in the graphic arts has steadily increased. Last June he returned from France where for three years he had lived and sketched away for dear life. The results he had sent back to American periodicals, architectural and otherwise, who developed a taste for them which soon became insatiable. From pen and pencil he has recently branched away into the fields of etching and lithography, to produce in them results over which it is difficult to control an unseemly rush of superlatives. Said *The American Architect* last August, on publication of some of his latest work, "We believe that at no time has there been presented in the architectural press a group of illustrations of greater artistic merit than the reproductions of the etchings of Samuel Chamberlain which accompany his article this month." The belief would be hard to challenge.

And so we point. We have seen all the sketches, and you so far have seen only one (patience, patience) but we believe that you will agree with us as the year wears on that Mr. Chamberlain has invested the Institute buildings with a warmth and humanity that some of us had not previously imagined they could possess. We feel quite secure about our covers for the year, but we do confess that now and then we wonder if we shall be able to maintain the inside of the magazine at a standard that will be at all commensurate.

Some Reflections from the Shenandoah Disaster



P. & A. Photo

A frank discussion of the September catastrophe and an analysis of its causes

AS this article is written, the work of the court of inquiry engaged in investigating the loss of the airship *Shenandoah* in a thunderstorm during the first week of September is entering its second stage. So far concerned primarily with the examination of the surviving members of the crew and the determination from their testimony of the circumstances under which the accident occurred, and with the airing of certain controversies which had boiled up to the surface in the daily press, it is understood that the movement of the seat of the court's work from Lakehurst to Washington is to inaugurate a more profound study of the technical phases of the disaster. The object is now not only to find out what happened, but why. The progress of every branch of engineering science is marked by occasions of mourning. It is impossible to hope that they will be entirely avoided, but they do not come without cause, and it is only through the analysis of the causes of each mishap that the prospect of recurrence in like

By EDWARD P. WARNER, S.M. '17
Professor of Aeronautical Engineering

form may in any way be minimized.

It would be foolish to deny that the loss of the *Shenandoah* comes as

a hard blow to the believer in the significance of the rigid airship. Even if his own confidence were unshaken, that of the public has been so disturbed that years will be needed for recovery, and no facile explanation is at hand to quiet the alarm that has been raised.

Past airship tragedies, in practically all instances,

have involved ships either of experimental design or those about the structural strength of which some suspicions have clung. There has been nothing of the sort in this instance. It is true that the *Shenandoah* was not strictly modern in design, having followed the general pattern of a Zeppelin constructed in the second or third year of the war, but it would be a mistake to over-emphasize this apparent out-of-dateness. The exterior form of Zeppelin ships has undergone important changes since 1916, but the fundamentals of the structure remain unaltered, and no rigid airship project has been launched under conditions

WITH some justice this number of The Review might be labelled an Aviation Issue. Technology men have reason to be deeply interested in two recent occurrences in American aeronautics: one, the tragedy of the Shenandoah; two, the near tragedy, ending happily at the last moment, of the loss of the Hawaiian 'non-stop' plane. In this article and the one on a succeeding page, both these events are presented at first hand.

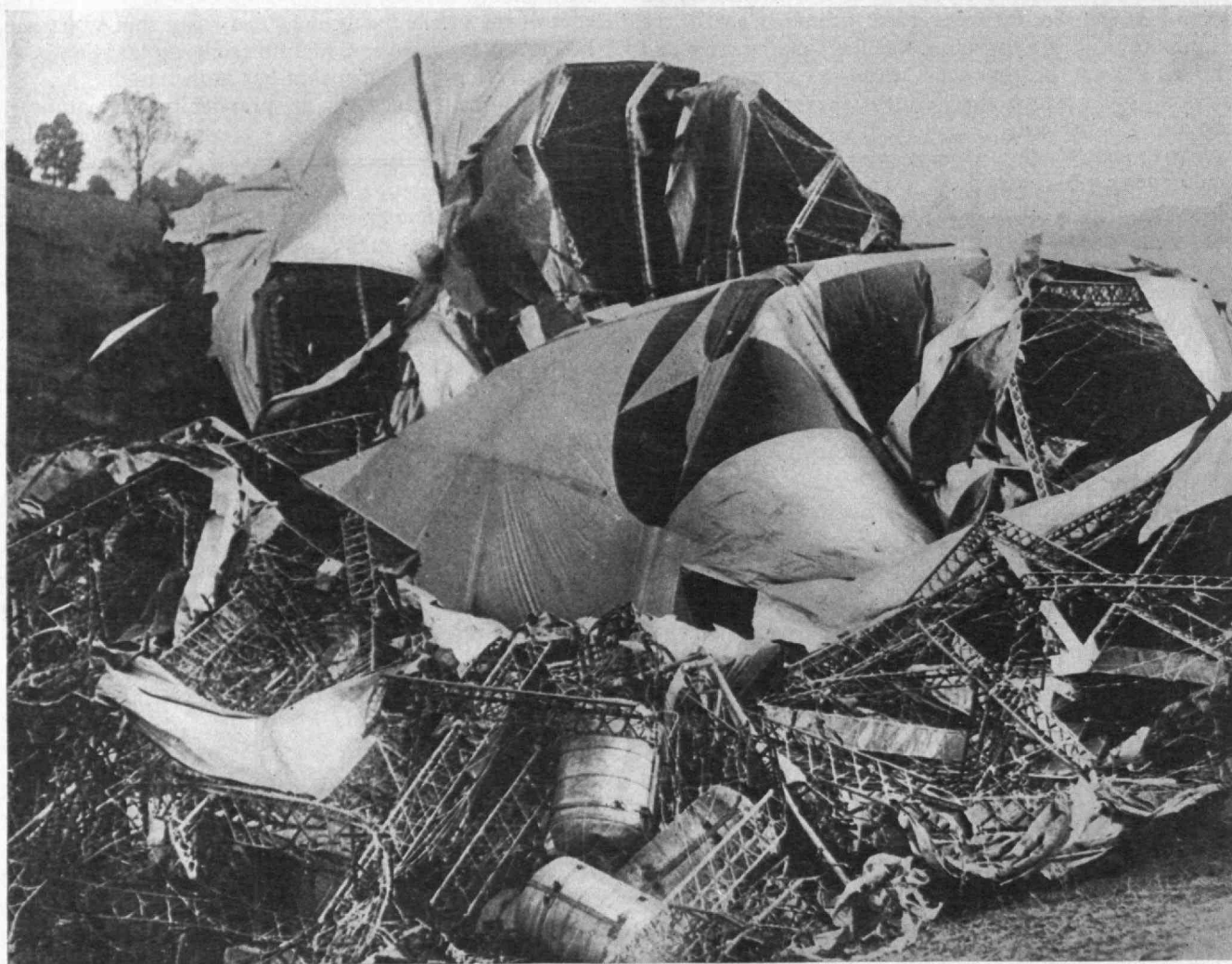
In this article, written at the request of the Review Editors, Professor Warner, Head of the Institute's Course in Aeronautical Engineering, makes some frank comments on the Shenandoah catastrophe, and points the moral to it. Will the lighter-than-air craft ever become a safe practicality? How long will it be before the dirigible is restored in the public confidence now so badly shaken by the series of disasters that have overtaken this type of ship in the past five years? Professor Warner has an answer to these questions, and some others. Particularly he pays his respects to the authors of talk to the effect that despite the Shenandoah, "bigger and better" ships must immediately be constructed.

In the design, construction and research upon the Shenandoah, as well as in expert testimony on the wreck, Technology men played an important part. Happily, none of their work has been called into question, but the resulting close connection of the Institute with the ship will make this article one of vital interest to all Technology men.

more favorable than those attendant upon the design of the first American-built ship of that type. With a design based on German practice to begin with and checked throughout by naval engineers, still another complete check was made at the request of the Navy by a committee of structural and aerodynamical experts appointed by the National Advisory Committee for Aeronautics. Professor William Hovgaard, of the Institute Faculty, served as a member of that eminent body, which gave the *Shenandoah* a clean bill of health. The work of construction was marked throughout by a care which called forth the admiring comment of experts who saw it in process, and tests made by Captain Heinen and others after the assembly was complete seemed to indicate a strength adequate for any conditions likely to be encountered. A ship of 1925 design, with the larger ratio of diameter to length which is now common, should be somewhat stronger for the same weight or a little lighter for the same nominal strength, but the difference would be by no means great enough to justify the putting aside of the recent accident as without bearing on the operations of ships to be built in the future. There is more to the problem than this.

The complexity of the structure of a rigid airship, involving as it does an enormous number of redundant members, makes the problem of the analysis of its stresses a highly formidable one. It is a problem which has attracted some of the best engineering and mathematical talent in America, Germany, and Great Britain during the last few years, but there has not yet been devised a method of calculation rigorously correct, or one which all authorities will accept as completely satisfactory. Calculations of some sort there must be, for the reserve of lift in any airship is too small to permit such empirical methods for determining the proportions of structural members as are commonly employed in sea-craft: methods which because they are empirical must allow for very generous factors of safety. If the airship is to carry a useful load which will make it of substantial value either in war or in commerce the waste of weight in the structure must be avoided by designing for the greatest possible uniformity of strength throughout.

Fortunately, although general agreement on the hypotheses and assumptions to be used as a basis for stress analysis has not been reached, there is not a



P. & A. Photo

THE REMAINS OF THE SHENANDOAH

A close-up photograph of the middle section of the wrecked airship, showing the hopeless snarl of steel and fabric to which a line squall reduced the Shenandoah when she struck it on September 3 over Ava, Ohio

great deal of difference among the more important results given by the several methods available. Furthermore, there has been direct check, both in the laboratory and in flight, on the results of analysis of the complete airship structure. The stress distribution in the model of an airship cell has been studied by Professor Paul Heymans [Ph.D., '22] and his associates in the laboratory of photo-elasticity at the Institute, and the actual stresses in particular members of the structure in flight have been measured on the *Sbenandoab* with the aid of extensometers attached to girders and wires. In the light of information thus gained, and of the long and exhaustive study that has been made in the theory of the subject, it is not the determination of the distribution of stress arising from a given system of loads which causes most concern to the airship designer.

A far more serious matter is the determination of the loads themselves, and especially of those caused by travel through disturbed air. For the designer of airplanes the question of "bumps" is on the whole unimportant from the structural standpoint, as the stresses due to the pilot's maneuvering of the machine may reach values far in excess of any that would be expected to result from steady flight through a turbulent atmosphere. For an airship, assuming the pilot to operate the controls with proper discretion, the reverse is true. The loads due to convection currents and other irregularities of atmospheric structure may be very large, as witness both the final destruction of the *Sbenandoab* and the violent manner in which that ship was tossed up and down during the period immediately previous to the final collapse. Unfortunately, no one knows how large such forces are. They cannot be calculated, and it is only with great difficulty that they can be measured, for no ship will be equipped with measuring instruments, and deliberately taken into such a storm as wrecked the *Sbenandoab*, as an incident to a research program.

Although it is not literally true that lightning never strikes twice in the same place, it is quite true that one would have to wait a long time before a storm of a desired type and strength centered itself at the observing station prepared to record its coming, and it is perhaps for that reason as much as any other that information on atmospheric structure under abnormal weather conditions is so vague and scanty. The observations are necessarily highly discontinuous. In any case, they are difficult to make and to interpret, relating as they do to an exceedingly turbulent and invisible fluid.

Complex though the problem of atmospheric structure is, its further investigation is of vital importance. It is fortunately possible for airships to avoid storms in most instances, and no one can make any study of the practices of skilled pilots, as revealed, for example, in the course followed by the *Los Angeles* on its way from Germany to America last autumn, without realizing how important a part a knowledge of meteorology plays in a pilot's qualifications. For that matter, one cannot read Captain Heinen's testimony before the court of inquiry on the *Sbenandoab* without being brought to the same realization. It will not always be possible to dodge disturbances, however, and dodging them must be a matter of convenience and expediency

rather than of vital necessity. It has recently been stated that no airship could have lived through the storm which broke up the *Sbenandoab* and that none can be built to withstand such weather. That cannot and must not be accepted as final. The storm in question was a very severe one, but it was not of extraordinary or unprecedented force, and if every airship coming into a violent thunder-squall were to be in imminent danger of collapse there would be very little practical use for airships. Outstanding among the lessons of the *Sbenandoab* disaster, then, is the necessity for learning more of the nature of the loads imposed in flying through abnormally bad air.

It will not have escaped the notice of those who feel even the slightest interest in lighter-than-air craft that there has been during the past two years a steadily increasing amount of talk about the importance of increasing the size of rigid ships.

The larger ship certainly has very distinct advantages. If the horsepower of the engine is increased in the same ratio as the total lift there is a steady gain of speed with increasing dimension, and a corresponding increase in the possible radius of action at a given cruising speed. The possession of more speed means more effective maneuvering, and consequently a better chance of avoiding a storm if only short warning of the danger is had.

From the special point of view of liability to accident in storm the large ship has both merits and drawbacks. One of its important advantages in addition to those already mentioned, is that an increase of volume causes the buoyancy forces to go up more rapidly than those due to the influence of air currents, and the proportion of the total weight of the ship which would have to be dropped as emergency ballast to oppose a given downward motion in disturbed air would decrease.

If the scale of the structure of atmospheric disturbance were increased in geometrical similarity to that of the ship the stresses imposed by a given disturbance would be independent of size. Unfortunately, the structure of the air has nothing to do with the size of the airship that moves in it, and the liability of the existence of markedly different conditions at different points along the length of the ship, such, for example, as convection currents of opposing nature applying a direct shearing stress, increases with increasing size. There is no doubt of the advantage of the ship of moderately large volume, but it is necessary to tread cautiously in making the increase, and not to go too far at a single step or to speak too glibly of hulls representing a four-fold multiplication in capacity of anything previously known. There are several projects now afoot for the construction of ships of 5,000,000 cubic feet, but the most conspicuous of the lot, that of the British Air Ministry, is very wisely being held up pending further researches.

The ultimate future of the airship is still uncertain, and speculation is hardly fruitful. Experiments will of course be continued, and through them the future will prove itself. There is no reason for present pessimism, but September's tragedy makes it even clearer than it was before that engineers now have insufficient data on the nature of the cosmic forces with which their products must contend. The key to future progress lies in further research.

"The Flight that Failed"

*A personal narrative of crucial moments in the
Hawaiian non-stop attempt*

By BYRON J. CONNELL, S.M., '25

Navigator of the Plane

THE final day arrived. I taxied into position, opened the throttles and started to take off. The wind by this time had practically died down and the plane did not respond or act as if it would get off. Then I observed Snody's plane starting to run and I said to myself: "I'll break this thing or sink it or I'll get off."

After about a six-mile run I was able to pull the plane off the water and the flight began. We passed through the Golden Gate and things seemed to be coming along well. The engines were humming, "Honolulu, all's well." We knew we had just about enough gasoline to make the trip successfully if we encountered favorable trade winds, which at this time of the year are almost a certainty. The weather report showed that for the first 200 miles we would hit an unfavorable or head wind, and we expected it. However, the head wind was of low velocity and the weather conditions seemed ideal. The air was smooth. There was no fog outside the Golden Gate. Commander Rodgers was busy in the bow checking the drift. As soon as we were clear of the Golden Gate he passed back a note with the course. I took a check of all compasses and soon picked up the first station.

This ship was picked up right on the line. I began to feel now that we were assured of success, and for the first time I really sat back, relaxed and took a little rest. By this time night was approaching. We were out far enough to pick up the trade winds and kept watching the water to see if the wind would gradually shift around behind us. It seemed to do this about the distance out that we had counted on, but the velocity was very light — lighter than I had hoped for. The moon was full, there was plenty of light to see the water and we had no difficulty in picking up the station ships on the line, although it seemed to take considerable time to run between each station ship.

During the night the Commander threw over flares which lighted when they struck the surface of the water and by these we estimated our drift. We were supposed to eat two sandwiches and drink a cup of coffee every six hours during the flight. I think most of us were so interested in what was happening that we forgot about eating until we had been out about ten hours. We then took up the schedule of eating.

The doctors had prescribed a certain brand of ham, to be prepared in a special way, to give us the most nourishment. When I tried my first sandwich, I decided that science was all right in its place but couldn't make tough meat tender and appetizing.

We were now more than half way across. The moon



Acme Photo

COMMANDER JOHN RODGERS

Captain of the lost and fabulously lucky seaplane PN-9 No. 1, whose navigator, Byron James Connell, S.M., '25, here tells the story of the days in mid-Pacific. This likeness of Commander Rodgers was sent by radio impulses from Honolulu to San Francisco by the process invented by Richard H. Ranger, '11.

disappeared just before daylight and we hit a few rain squalls. The visibility was very poor, which made me think how true was the old saying, "It's always darkest just before dawn." Just after sunrise we picked up the *Langley* about twenty miles away, although I do not believe she saw us. When the sun rose we noticed there was hardly a breath of air stirring and we knew there had been practically no wind during the night. When we checked up the gasoline this time Bowlin passed up a note stating the quantity remaining.

We now started some tall worrying. We had hopes that the trade wind might pick up and we would be able to make it. The Commander passed a note back to me reading: "I think we will get a little increased wind velocity about 10 o'clock." Every one connected with the flight knew that without the trade winds we would have to land and refuel, but the trade winds are generally so steady that no one thought we'd have any trouble on this account. From this point on we kept Pope and Bowlin busy making frequent checks of the gasoline. About 10 o'clock the trade wind picked up five or six miles. It was now apparent that we would have to land and refuel, and I passed a note to the Commander telling him we had gasoline left for approximately three more hours of flying.

I then observed signs of unusual activity in the front cockpit. The chart board was being worked overtime. It was evident that the one thing to do was to land near the *Aroostook*, which was the next to the last station ship.

This still gave us an hour's leeway to insure that we would pick her up. We felt we could land, take on several hundred gallons of gasoline and fly on to Honolulu without much trouble.

I felt sure we would have no difficulty in picking up the *Aroostook*. The Commander, to insure our not missing her, asked for radio bearings, and it was due to a misunderstanding about the radio bearings that we failed to pick her up as she gave us reciprocal bearings. We flew to the point where we believed the *Aroostook* should be. Not seeing her, we turned and flew north, away from our course, in accordance with the radio bearings. After we had flown about twenty miles the visibility became very poor and there were numerous rain squalls scattered around, which might prevent us from seeing the *Aroostook* unless we were very close to her. We continued to search the area indicated as her position by the radio bearings without avail. Bowlin had relieved Pope as second pilot and was flying the ship when both motors cut out in the air. Every drop of gas in the gravity tank was gone.

He handed over the controls to me. I spiraled around into the wind and started my glide for the landing at about 800 feet altitude. I knew this was the most crucial point of the flight up to the present

time, as a bad landing would be fatal. The sea, from the air, was not rough, and I felt that, with the gasoline gone, we were very light and would make a safe landing.

When the motors cut out the radioman attempted frantically to get off a position report, but he was unable to complete the message before landing.

I leveled off about twenty-five feet from the water. The plane settled down beautifully, almost without a jar. There was about a ten-foot sea running, with a light wind — rather unfavorable conditions, on the whole.

Very little was said after landing. Everybody was too disgusted for words and we merely looked at each other. Here we had worked night and day for three months to make a non-stop flight and failed. No one seemed to have the heart to say anything.

Rodgers estimated that we were about sixty miles from the *Aroostook*, in latitude 24 degrees 10 minutes and longitude 157 degrees 58 minutes. I crawled back

between the wings, lay on the top of the hull and went to sleep. I awoke four or five hours later, just about dark. I was pretty hungry and tried to eat a couple of the scientific ham sandwiches, but they seemed to taste stronger than ever. I ate half a sandwich and tossed the rest into the hull, only to search for it a few days later.

We turned on the range light on the top wing so that

we could be easily seen by searching ships, and arranged a watch for the night, the Commander standing the first watch. We put out a bucket for a sea anchor to hold into the wind. The Commander took a morning sight and figured we had drifted about two miles an hour during the night. My breakfast consisted of water, as I did not want to tackle the sandwiches, which by now were very moldy. The Commander had taken along some poi — Hawaiian food — in a food jar, but what little there was left had spoiled. His breakfast also was water.

We sat around the wings talking things over and expecting to be picked up at any moment. As the day passed we saw nothing. The waves seemed to be damaging the fabric of the outer ends of the lower wings. We cut some away, but hated to cut any more, as we wanted to leave sufficient wing surface to enable us to fly in when we got gasoline from one of the searching ships.

Our radio kite, which was to carry up the antenna to allow us to receive on the water, was carried away. We rigged a temporary antenna by stringing wire all around the ship, insulating it from the hull. We could now receive messages from 400 to 500 miles, but couldn't send anything, as we hadn't a drop of gasoline left to turn up the motor and thus revolve the radio generator.

It was very nice to be able to hear the news items and follow the work of the ships searching for us. We plotted all their positions and saw they were searching too far south for us. One message we intercepted said they estimated our drift during the night to be five miles an hour. This accounted for the search being made to the southward.

Up to the present we really were enjoying a much needed rest, however, and had felt no discomforts at all. The Commander made the remark that many people

BYRON JAMES CONNELL, navigator of the seaplane PN-9 No. 1, whose crew so closely escaped death from starvation and exposure when the plane was forced down in mid-Pacific, is a Technology graduate. He entered the Institute in October, 1923, as a graduate student in Aeronautics, and in January, 1925, received the degree of Master of Science. Previous to this he had been at the Institute for several months, with headquarters in the Walker Memorial building, during his assignment to the Ground School for Naval Aviators in 1918. He was transferred from this to San Diego as a Chief Quartermaster (Aviation), U. S. N. R. F. His latest listing in the Register of Former Students is as "Lieutenant, U. S. N., Scouting Plane Squadron 1, Naval Air Station, Hampton Roads, Va."

In this story (permission to reprint which is granted through courtesy of the New York Times, in which it originally appeared) Lieutenant Connell recounts the thrilling story of the flight, the loss, the rescue, sparing no detail of the experience which all but cost his life.

spent a lot of money to go yachting with more discomforts than we had.

Finally we got a message from the *Aroostook* reading: "If you see *Aroostook* near you, fire star shell or show light. We thought we saw a flare ahead."

I shot a Very pistol. The anchor light of the top wing was already on. We knew the *Aroostook* was near and were very hopeful of being picked up the next day, but we were beginning to get a little hungry.

I was awakened by a cry from Bowlin on lookout: "I see smoke ahead."

In a short time it was possible to discern a merchant steamer. We thought, "This is pretty fine, but we are not going to be able to get gasoline from her." We decided we would ask her to radio to the searching ships our position so we would get gasoline immediately. I crawled out on a wing, cut loose one of the wing tip flares and then climbed up on top of the wing prepared to attract the steamer's attention when she passed close.

I waved a piece of fabric tied on a stick until I was nearly exhausted and could hardly climb down from the top of the wing. I was very much disappointed, as I thought there would be a good, square meal as a reward for my efforts. In fact, we were dumfounded that we had not been seen, although I realized on second thought that we were between the sun and the merchant ship, and anyone aboard her would be looking directly into the sun. I should say she passed within about five miles of us.

We now began to think that not being picked up was not so much fun. We took an inventory of our water and food supply. We had seven quart army canteens of water and five or six sandwiches left. We also had not opened the emergency rations, consisting of three pounds

of crackers and one six-pound can of corned beef, commonly called "canned willie." We still had two quart thermos bottles of black coffee which had long since got cold, but which was beginning to taste pretty good by now.

I had been thinking for a couple of days how we could manufacture some kind of a sending set. I thought if we took off the aëromarine flywheel starter and secured it in some fashion to the end of the radio generator shaft we might be able to turn it up to sufficient speed to get off a message and a position report. It was a pretty hard job to get the starter off, as we carried only a very few tools, in order to save weight.

After working for several days we completed the hook-up, fastening the engine starter to the end of the radio generator shaft with hose and hose clamps. All gathered around and tried to hold the starter in position. I began to crank. It was pretty wobbly. I estimated that we had turned it up to about 1000 r.p.m. when it pulled loose. If we could have turned it up to about 2500 r.p.m. we could have got a message off and been picked up immediately.

We tried various other methods of fastening it, but we were unable to secure it strongly enough to make it a success.

Bowlin and Stantz decided to try to rig up a spark set. We took the Delco ignition equipment to get coils and condensers. Finally we did fix up something that had more resemblance to a static machine than to a spark set. It threw a spark which looked as though it would transmit a message around the world, but I doubt if it carried more than ten miles. None of our messages were received. We then tried to rig a third set. Stantz tore the transmitter down in order to get parts,



Times Wide World Photo

CASTAWAYS!

The rescued crew of the PN-9 No. 1, photographed the morning after their rescue at Nawiliwili Harbor. From left to right they are: W. H. Bowlin, machinist mate, Lieutenant Connell, Commander Rodgers, S. R. Pope, aviation pilot, O. G. Stantz, radio operator. Obviously the prevailing emotion seems to be that of a grand and glorious feeling

but nothing seemed to work satisfactorily, as we didn't have sufficient equipment.

About this time we decided to rig sails. We cut the sails in sections, climbed out on the wings and fastened them by tying them to the wings with safety wire, thus hoping to increase our speed toward Oahu, or at least to get down south, where we knew the searching vessels were.

By this time we all were getting disgusted and pretty hungry. Every man knew his canteen water had to be carefully conserved.

The pseudo-toast which I had made from the sandwich bread, by spreading it on a wing in the sun, tasted mighty good about this time. For some unknown reason the meat which we had put on the wing had disappeared, piece by piece, as the various members of the crew got up sufficient courage to eat it. I enjoyed some of it immensely and wondered how the sun had improved it so much in flavor.

We finally received a message telling us the position of five submarines. After we had plotted the positions every one felt much encouraged as we saw our course would take us directly in their path. We even estimated the exact minute at which we would be sighted, the exact point where the *Pelican* would pick us up. We bent all sails possible and our hopes brightened. We tried to meet the scouting line as fast as we could at the great speed of two and a half miles an hour.

Later in the day, however, when we had figured the ships were not thirty miles away, we received another message directing them to retire to the westward, and we knew we were in for another day of it. It was very hard to be able to plot all the positions of the ships, know where they were and what they were trying to do and yet not be able to tell them where we were. However, we were so sure we were going to be picked up that, although we conserved the water, we did not worry about how long the crackers would last.

Friday night we decided to open the "canned willie." It tasted pretty good. It made a very poor emergency ration, however, as anything of this nature requires considerable water. We had very little — rationed one paper drinking cup of meat per man the first time. The next day we rationed out half a cup twice, but nobody really enjoyed it. The Commander refused his share, saying it made us sick to eat it without sufficient water. "It is like running a motor without gasoline and oil," he said.

The next day I found he was right. I was terribly sick, due to the "canned willie." None of us was able to keep it down.

Friday night the sea was so rough that we had to take the sails down and put out a sea anchor. The wing tip pontoons took a terrible beating from the waves that night. Thereafter we kept a man in the pilot's seat at all times to keep the ship into the wind and control the drift.

Sailing a plane on the water requires considerable skill. Pope seemed to excel us all in this flying on the water. This flight brought out very forcibly the training in seamanship and navigation necessary for a naval aviator.

Saturday morning our crackers had disappeared. As

we could not eat the corned beef, it looked as though our diet would be water until we were picked up.

I noticed the Commander that morning down in the hull crawling around on his hands and knees and wondered what he was doing. On close examination I discovered that he was trying to dig out a piece of crust from one of the sandwiches which some one had dropped in the bilges. He finally got it out — it was about as big as the end of your thumb — and seemed to relish it greatly.

That night while he was navigating, the reflection flashlight over the chart board evidently attracted a small flying fish about as big as a minnow. The Commander called our attention to the beautiful fish that he had found in front of the cockpit. He seemed to take much pride in it, stroking it tenderly when he called us to view it. It never occurred to me then that he was preparing to enjoy a repast of fish. He said it tasted very fine.

That night we rigged a light back by the radio door which was near the water in hopes that more flying fish would fall to our lot. But our attempts were unsuccessful.

The canteen water which had been issued to each man had gone by this time and we decided to try the Commander's still, which his mother had presented to him to carry on the flight. It was originally intended that gasoline fuel should be used for the still, but we had absolutely not a drop left. We decided to try to make it work by burning wood and wing fabric. We rigged up a bucket and built a fire in it. The wood we stripped from the trailing edges of the lower wings. We kept the fire going by adding pieces of the fabric when the wood ran out.

In about five hours we had distilled less than a quart of fresh water. At this rate we would have to burn up the whole plane to make enough water to be of any value, as we had used all of the wood it was possible to take from the lower wings without weakening their strength.

However, we got one message that cheered us immensely. The *Aroostook* said: "Cheer up, John, we'll get you yet. Use Very stars. Hammer hull so submarine will hear you on oscillators. Use your receiver as a transmitter." Stantz showed the message to the Commander and he enjoyed it immensely.

We began all to get weak about this time. Keeping awake, standing watch and sitting in the cockpit handling the controls was a great effort. Moving around for a short time would necessitate lying down to rest. Everybody practically crawled from place to place. By a great effort we were able to change the rigging of our sails as we found it necessary. We ran a line from the bow to the stern so the pitch of the ship would not throw any of us overboard.

The two reserve canteens of water had been issued very sparingly, drink by drink, by the Commander and lasted several days. On Monday the water was entirely gone. It was a question then how long we could last.

We knew we had sailed about 300 miles, at the rate of fifty miles a day, and the chart showed our position to be near Oahu. Tuesday night we saw the army searchlights located at Schofield Barracks, on Oahu. This was the first sign of life we had seen after the steamer passed us on Thursday. It also checked the Commander's naviga-

tion very well, as he took bearings on our position and the lights.

Pope thought we were just about ready to land in the harbor and asked:

"How far are those lights, Captain?"

The Commander answered, "Only about one hundred miles."

About this time we intercepted messages which led us to believe we had been given up for lost and seemed to indicate that the search had been abandoned. This was sad news, as we thought the channel between Oahu and Kauai would no longer be guarded; but Admiral MacDonald had no idea of discontinuing the search. As we later found out, this message was only a recommendation that the search be given up.

Before the message was received we all felt sure we would be picked up by the searching vessels, but we realized we would have actually to sail the plane to land to be saved. Our position and drift were such that the trade wind would take us through the middle Kauai channel without touching land.

Something had to be done. I finally thought if I could rig some kind of an artificial keel, similar to a leeboard on a sailing canoe, perhaps we could tack the amount necessary to hit land. We took up the flooring throughout the plane and lashed it along the hull, which gave us an artificial keel. This worked beautifully and we were able to tack fifteen degrees from the wind. Our hopes brightened, for we thought we might possibly be able to make Oahu instead of passing down between the islands.

We set our course for Oahu and put on all sail possible, making the terrific speed of two knots. The next morning when we arose we looked directly at Oahu. We could see the island as plainly as day. It was a wonderful sight — the first land we had seen since we left San Francisco. We were still about fifty miles from the island, although it looked to be only a few miles away.

The Commander worked out our position, but the sights showed us it was doubtful if we could reach Oahu. The Commander finally decided it would be better to change our course and try to sail toward Kauai, which he felt we could make. If we had been absolutely sure of being picked up we could have undoubtedly sailed to within twenty miles of Oahu, but if we were not picked up it might mean nothing but the broad Pacific to aim for with no other land ahead of us.

Later the Commander's decision proved a wise one, but at the time it was pretty hard for us to sail away from the land toward the open sea again, for Kauai was 100 miles distant, while we were within fifty miles of Oahu.

Shortly after changing our course we saw a black cloud ahead of us. We made full preparations to catch the water if the rain cloud should pass over us. About 10 o'clock it started to rain. It poured down for half an hour. This, we believe, was the thing that did more than anything else to save us. We spread out all the sail possible and grouped ourselves around the wing fabric, scooping up the water as it fell and putting it in the thermos bottles and canteens. Everybody drank a little water, even though it was full of aluminum paint dope from the fabric. We collected about three quarts of water and proceeded to lick the fabric very carefully to

get all the remaining drops. The Commander led the formation in licking.

Kauai is usually enveloped in low-lying clouds and is not visible from a very great distance. We strained our eyes full of the sight of Oahu, all day Wednesday, to see if we could pick up Kauai, but were unable to do so. The Commander did considerable worrying while navigating that night. On our trip across the channel toward Kauai the wind was such that if it changed only a few degrees we could not make land. The Commander took sights practically all night.

About midnight he called to me and I went forward and looked at the chart to see the position. The sight he had just taken was evidently in error, due to the fact that he had a very poor horizon, as the moon was partly obscured. This showed that we were losing latitude and would miss Kauai. I worried a lot in the next half hour, until later sights showed me we would just be able to make it if the wind held, by tacking the full amount possible with the improvised leeboard.

Wednesday night we kept constant vigil for searchlights. We thought we saw several lights quite distinctly. Each time I fired a Very star, but if they were searchlights they were at such a distance that the Very rockets were unobserved. Thursday the sun came up and we thought should have been able to see Kauai, but the island was still invisible due to heavy rain squalls. This worried me, although I had faith in the Commander's navigation.

About 9 o'clock it cleared somewhat and there was Kauai directly ahead of us!

We all felt like shouting. It was now only a question of time until we should be within close range. We carefully considered our course and allowed for various changes of the wind within a few degrees. It looked as if it would be possible to sail directly to the island in case we drifted by it without being seen.

We planned to have one or two men paddle and sail an improvised raft, made by lashing two gas tanks together. We kept approaching the island, still worrying whether we would pass close or be able to hit the land. Finally about 2 o'clock we were some ten miles off the shore in such a position that it was impossible to miss the island. Allowing for any slight changes in the wind, we knew we had made it. We were safe!

It was a great feeling that I knew then that we were absolutely sure of making the land. We were saved. It simply was a question of drifting a few miles further.

The Commander, however, explained that it would be very dangerous to drift into the shoals and surf along Kauai at night. He explained that there were only two harbors where heavy surf would not be encountered. None of us had really realized this danger. We were just glad to see land, to get near it. I think we would have been tickled to death to drift onto the shore right then, though it might have been fatal, for we were too weak to swim through the surf.

The Commander then directed us to remove one of the large gasoline tanks with the idea of making a large sea anchor which would slow down our drift and enable us to hit the shore the next morning instead of during the night. We cut out the control wire and rigged an im-

provided anchor with the two storage batteries of the engine starter.

It seemed hard to realize that we had been working day and night to reach land and that now we were trying to prevent ourselves from landing for another night. We thought perhaps we could attract the attention of some one on shore and get a tow.

The Commander built a fire in a bucket, using the wing fabric for fuel, in order to send smoke signals. He said it would be just like the searching ships to show up now that we were about to make port. I got up on the top of one wing and frantically waved a stick with a piece of wing fabric tied to it, while the Commander continued to send smoke signals. We had only ten miles to reach port.

Hardly fifteen minutes had passed when Bowlin yelled excitedly:

"There's a submarine back of us!"

All looked back. We saw it coming full speed toward us. We felt then we would be able to save the plane and prevent going on the rocks.

The R-4 semaphored, "What plane is that?"

Stantz replied, "PN-9 No. 1 from San Francisco."

When we got to within hailing distance we called over for some water, food, cigarettes and coffee. They threw us a heaving line and passed over five gallons of water and some food. Finally we got the towing gear arranged

and the submarine started to tow us into the harbor. After we were well started we decided to have a needed repast. We drank the water first. The Commander suggested that we put aluminum paint in it so it would taste natural. Then we opened cans of peaches, located one spoon and a granite cup and took turns in devouring the peaches. Never have I tasted anything so good in my life.

As we approached the narrow harbor entrance, partly protected by a small breakwater, we could hear the surf pounding on the reefs and we realized that to have drifted in at night would have been fatal to the plane and might easily have resulted in loss of life.

A boat came alongside and we requested it to tow us to sheltered water. The power boat and the plane drifted over the reef together and there was a grand tangle. At this point a finger on the Commander's left hand was broken while he was attempting to hold fast the towing line.

The whole town of Lihue was evidently out to greet us. We covered the cockpits with sails, secured everything and were rowed ashore. Thus ended our flight of 1,870 miles, followed by a sail of 450 miles. We felt we had accomplished our object of getting a plane from San Francisco to Hawaii without damage to the plane other than that done by ourselves in burning the trailing edges of both the lower wings for fuel and cutting the fabric off the wings.



QUINCY MARKET AND FANEUIL HALL

From the water color of Ralph Coolidge Henry, '97. Reproduced by courtesy of Pencil Points

Chemistry and Royalty

*Of the incidentals to a scientific voyage; of banquets and toasts; of horseracing and "Hamendex" and a variety of other matters**

IT was my good fortune this summer to represent American chemists at two international chemical congresses. As many of my experiences were of a distinctly personal nature, it will be necessary for me to use in recounting them the unpopular pronoun "I". I offer apologies at the very beginning and crave the indulgence of the reader. As my mission brought me in touch with not only some of the leading chemists of the world, but with a King, a Queen, and the Peerage of England, the experience was somewhat out of the ordinary for an American traveler in Europe.

The good fortune of being selected to represent American chemistry resulted from the fact that during the past year I had been granted by the authorities of the Institute the privilege of devoting a large share of my time to helping in the work of the National Research Council, and as Chairman of the Division of Chemistry and Chemical Technology, I was the head of the delegation sent to represent American chemistry at the Sixth Congress of the International Union of Pure and Applied Chemistry which was held in Bucharest in the week beginning June 21.

As President of the American Chemical Society, I represented the Society at the celebration in London of the One Hundredth Anniversary of the discovery of benzene by Michael Faraday.

The start was made armed with a diplomatic passport viséd by representatives in Washington of the thirteen countries through which it was necessary to pass

By JAMES F. NORRIS
Professor of Organic Chemistry

PROFESSOR NORRIS went abroad last summer on a mission of chemical statesmanship. As Chairman of the Division of Chemistry and Chemical Technology of the National Research Council he attended in Bucharest, Roumania, the Sixth Congress of the International Union of Pure and Applied Chemistry. As President of the American Chemical Society he was present in London to help celebrate the One Hundredth Anniversary of the discovery of benzene by Michael Faraday.

The journey was not given over wholly to matters of reaction velocity and stereoisomerism. More than once Professor Norris found opportunity for

on the journey. I had reason to be thankful that the State Department of the United States Government was sufficiently interested in scientific conferences of an international character to grant to the representatives of American science its approval to the extent of furnishing them with special passport facilities.

One of the American delegates who had the usual type of passport was submitted to a very unpleasant examination when he was about to leave Roumania. He was searched, had to explain why he carried every paper in his possession, was compelled to translate a number of private letters, and was accused of attempting to take from the country more money than is allowed by the regulations of the State. Some unsigned American Express checks which had not been declared were thought to be currency and were to be confiscated, when a friend who was fortunate enough to have a diplomatic passport stepped forward and cleared up the difficulty. The bearers of the diplomatic passports, however, were treated with much courtesy and no examinations of baggage were made.

A short stay in Paris made it possible to see again some of the treasures of the city which had been a source of delight in the past.

Unfortunately, I revisited the Louvre one morning and the Salon of 1925 on the afternoon of the same day. The contrast between the two made one who is devoting his life to science glad that he was in a field where progress is so rapid.

A visit was made to the battlefields from Paris. I had seen the country before the war, during the war, and after the signing of the Armistice before any work had



PROF. JAMES F. NORRIS

relaxation from the cares of chemistry, and more than once found himself in the midst of an amusing situation. In this article, written at the request of The Review, Professor Norris has for the moment cast the scientific side of his journey into the background and illuminated for you a few occurrences of an altogether non-technical nature.

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been done to repair the damage. I could hardly believe what I saw; everything was in order. The villages were all rebuilt, the roads were in excellent repair, and the fields cultivated. We had to search for a small bit of a trench that had been left intact to show the visitor the type of construction used. Only in the large towns like Soisson and Rheims were evidences of the havoc visible, and these places, too, were being rapidly rebuilt. To one who rides through the beautiful country the only reminders of the great tragedy are the well-kept graveyards with their innumerable crosses, row after row.

I went to England two days before the Faraday celebration to be the guest of Professor Joselyn Thorpe of the Imperial College of Science and Technology in London. A day on the Thames and the opportunity to visit some of the interesting clubs of London and to meet informally English scientists, gave me an excellent insight into English hospitality.

The Faraday celebration brought together chemists from all over the world. The exercises, which were held in the Royal Institution made famous by Davey, Faraday, and Dewar, were presided over by the Duke of Northumberland, the Honorary President of the Institution. Five of the

delegates, among whom was the representative of America, were made honorary members of the Royal Institution of Great Britain and were presented with elaborate parchments in which were outlined the rights and privileges of membership. At the informal luncheon which followed and the tea given by Sir William Bragg, the present head of the Royal Institution, I had an opportunity to renew many of the very pleasant friendships made during the war. As Liaison Officer on gas warfare between the British and American Armies, with headquarters in London, it had been my privilege during the war to come in close touch with the leaders in British chemistry. Sir William was particularly courteous to me individually, and showed me in great detail the wonderful work which the Institution is doing. The Royal Institution, as many will remember, was founded by an American, Benjamin Thompson, Count Rumford, born in 1753 in the city now called Concord, N. H. The Institution has been for over a century an inspiration in the development of physics and chemistry in Great Britain. One could not help

feeling that a great opportunity presents itself to establish such an organization in America. I can think of no better way of accelerating the great advance which has been made in recent



CHEMISTRY IN EXCELSIS

The International gathering of chemists in Bucharest for the Sixth Congress of the International Union of Pure and Applied Chemistry. By reference to the key the following may be identified:

- (1) C. L. Parsons, U. S. A.; (2) E. Moles, Spain; (3) W. Swietoslawski, Poland; (4) H. R. Kruyt, Holland; (5) Masao Katayama, Japan; (6) E. Biilmann, Denmark; (7) R. Nasisi, Italy; (8) E. Votocek, Czecho-slovakia; (9) A. Bebal, France; (10) F. Dreyer, Estbonia; (11) D. Fornitich, Yugoslavia; (12) C. Zengbelis, Greece; (13) Sir William Pope, England; (14) J. J. Gatti, Argentina; (15) C. Moureu, France; (16) Professor Norris; (17) F. Swarts, Belgium; (18) S. Minovici, Roumania; (19) J. Gerard, France; (20) V. Grignard, France; (21) P. Sabatier, France.

years in research in this country, than the investing of a reasonable sum of money in a central laboratory to take the position of leadership in research in pure physics and chemistry.

The formal banquet of the Institution was held in the great hall of the Goldsmith Company. It was conducted with all the formality that is the necessary accompaniment of such affairs in England. As the company assembled, the entrance of each guest was announced in a loud voice by the Master of Ceremonies. A diagram of the tables indicated where each guest was to sit. At this function (as also later at the many formal affairs in Roumania) the French and American delegates were always given the place of honor. It was my good fortune to sit beside the Presiding Officer, the Duke of Northumberland, who, like the rest of the company, wore the insignia and decorations which represented all the distinctions and honors bestowed upon them. The Duke, who is very active in political affairs in England, was very much alive to the problems before his nation and was conversant with not only international politics, but with domestic affairs in the United States. He had a very liberal point of view which one would not expect to find in a man who has the distinction of possessing, I believe, the second oldest title in the British Empire. He, like many others whom I met, was particularly interested in the progress of the prohibition idea in America.

The method of introducing the speakers at such a banquet was quite different from that followed in this country. Each one present has a detailed list of speakers with the subjects to be considered, and for this reason, perhaps, it is not considered necessary to introduce the several speakers. I had been asked to respond to the principal toast, "Chemical Science and Industrial Arts." Somewhat to my dismay, I received the invitation at one o'clock in the morning of the busy day on which the banquet was to be held. I was awakened from a sound sleep by my host, who informed me that he had received a request to give me this information. As there was no time for preparation, it was necessary for me to speak in a more or less impromptu manner. I had hoped to formulate my remarks during the course of the dinner, but then I found I was sitting next to the Duke of Northumberland, who is an extremely interesting conversationalist. It was thus only when I got to my feet that I was able to decide just what I was to talk about.

The announcement of my response to the toast was somewhat startling. The Master of Ceremonies, a man with a double-bass voice, climbed up behind the great armchair in which the Duke was sitting and cried out in a way to make the great hall resound, "Your Grace, My Lords, Ladies and Gentlemen: Silence for Professor Norris." I can testify that the responsibility felt by a speaker after this presentation is no small quantity. Then, too, this particular speaker was the only foreigner honored with an invitation to respond to the toast of the evening. An effort was made in the fifteen minutes allotted to sketch briefly the advance which had recently been made in the United States in bringing about a coöperation between the great research laboratories of the industries and the academic investigators of the universities.

A number of the delegates to the meeting of the International Union travelled in a special car on the Orient Express from Paris to Bucharest. As the journey took three days, there was an excellent opportunity to get into close contact with some of the leading chemists of Europe. Professor Grignard and Professor Sabatier, both of whom have been honored by the bestowal of the Nobel prize in chemistry, were in the party and proved to be men of charming personality. Professor Moureu of the Collège de France, whose work in chemistry has been rewarded by what is considered to be the leading professorship in France, was most genial and won the affection of every one. Sir William Pope, who has occupied positions which place him at the front of English chemistry, and who presided as President of the Union, was a source of inspiration and pleasure to the American delegates on the train.

The fact that we passed through five countries in going from Paris to Bucharest added interest to the journey. In the dining cars, for example, the bill of fare presented varied as we went from country to country. The prices were given in the money of the country where we happened to be. It was necessary, therefore, to exchange five times and to reckon bills in currency with which we were not familiar. In order to make the bill of fare intelligible, it was printed always in French as well as in the language of the country through which we were passing. When we passed the Roumanian frontier some of us were anxious to use the bill of fare as a source of information and attempted to learn some of the Roumanian names of common dishes. One item aroused particular interest. In the Roumanian list it was spelled "Hamendex." It quite converted us to phonetic spelling because it turned out inevitably to be ham and eggs themselves.

We were met at the frontier by a representative of the Government whose magic words passed us by without examination. We arrived at Bucharest on a Sunday morning, and some of us, finding that horse races were to be held in the afternoon, thought it a good opportunity to get our first look at the Roumanian social fabric.

We were somewhat disappointed from the standpoint of novelty, because it would have been impossible by merely looking at the people to tell them from a well-dressed and well-behaved American crowd. Nearly everybody took part in the betting, but as one was at liberty to wager as low as five cents on the horses with a maximum stake of five dollars, one could still lose and be happy. My usual good luck was with me. I was overjoyed when I found that my horse had won. I had breathlessly invested 100 lei, and after the great excitement was over, discovered that I had risked 50 cents and that my winnings amounted to a dollar and a half.

The most elaborate plans had been made for the delegates to the Union. The entertainment was largely financed by the Government, and the leading officials in all the cities took an active part in receiving the members of the Congress. The appreciation of science and scientists in Europe is very striking and there is a marked contrast with what we find at home. The banquets tendered the delegates were attended by the Minister of Public Instruction, the Mayor of Bucharest, the Minister of Finance in the Cabinet, and the Chief

of Police, who is an exceedingly important official, and who took upon himself the management of the entertainments provided for the ladies who were present. At one banquet I had the opportunity of sitting between the British Ambassador and the French Ambassador, both of whom showed great interest in the work for which the conference was called. I was fortunate in obtaining from them much information in regard to the Roumanian Government.

The banquets were most elaborate affairs and as it was necessary to take part in them twice a day for about ten days, the Americans, I am sure, came away feeling that they had been most royally entertained, but longing, nevertheless, for the "simple life." On my return to Paris after the meeting, my dinner for three consecutive evenings consisted of a ham sandwich and a glass of beer. I was content. Roumanian banquets began with a goodly portion of the national drink, which, for the honor of the country, all foreigners must consume with a show of delight. It was a potent liquid distilled from prunes which had been fermented. It was colorless and possessed an odor which recalled to organic chemists that of skatol. Luckily for those not used to the drink, it was usually served in small individual, long-neck flasks. By a rapid manipulation it was possible to insert the neck of the flask in the mouth in such a way that the material could be drunk without the nose taking part. We all agreed, however, that it put the recipient into an excellent condition for meeting the lengthy task put before him. We were in the land of caviar and soon learned to expect a goodly portion of it before the meal was served. A lengthy menu followed with the assistance of two kinds of wine and champagne, followed in turn by the standard liqueurs. After taking part in such a feast for two hours and a half, we would adjourn to consider the business of the convention or to attend some important function such as a special excursion, the placing of a wreath on the grave of the unknown soldier, or a visit to a laboratory of interest. This left enough time to put on our evening clothes and go to the banquet of the evening which followed. We all appreciated deeply the kindly thoughts which led to such elaborate entertainment and recognized we were in a country more East than West in its point of view.

On the day on which it was planned to conduct the most important business of the Congress, word came that the Royal family would receive fifteen of the delegates at luncheon at their summer palace. This made it imperative to readjust the program and the heads of the various delegations were taken in a special train to Siniai. The royal palace is situated in the most mountainous and beautiful part of Roumania, a ride of about three hours from Bucharest. It is comparatively modern, built in the style of the German Renaissance. The king who built it was an amateur wood carver and very much interested in the use of wood for decoration. As a consequence, the walls of the rooms in the palace are covered with the most beautiful inlaid and carved woodwork. The large central reception room is provided with a stained glass ceiling that can be readily withdrawn so that the room is open to the sky.

After removing the stains of travel, we were driven to the castle in Ford cars dating back to 1910. We were

received first by the officials of the household and the ladies in waiting. Each man was informed as to his place at the table and we were lined up to be presented to the King and Queen. Sir William Pope was at the head of the line and I happened to stand next. At the proper signal, two lackeys opened the great doors and out rushed two beautiful cocker spaniels who were immediately taken with the desire to untie my shoe laces. The King and Queen then entered the room, the King in full uniform and the Queen dressed in the beautiful native costume of Roumania. She wore a white blouse embroidered on the sleeves, and a rather short red skirt covered with designs in gold and silver. She is a remarkably handsome woman. The King in military fashion passed along the line and each one of us was presented. The Queen, however, stopped to chat with Sir William Pope and myself in quite an informal manner. When we took our assigned seats at the table, I found that my place was near the Royal family. The King sat at the middle of one side of the long table with the Queen opposite. Next to the King was the chief lady-in-waiting, and I found my place to be the next seat. Opposite the lady-in-waiting was the Crown Prince and next him Sir William Pope. The other delegates were arranged around the table between members of the household. The Prime Minister sat at the Queen's left hand. Along the entire length of the table in the middle flowers of a great variety of color were arranged close together so that they presented the appearance of a highly colored scarf.

The Queen's conversation had much to do with current events. Early in the luncheon she asked me if I was one of the chemists who made the horrible things during the war and when I said I was, she immediately entered into a discussion of chemical warfare. On account of her experiences with the Red Cross during the war, she was familiar with the subject and considered it from a very sane point of view. She was much interested in American affairs and was surprisingly well-informed concerning many minute details. I asked her if she was coming soon to America. She replied that she wanted to come but did not know whether she could or not. I replied, "What is the use of being a Queen if you cannot do what you please?" The gay laughter of the Queen caught the attention of everyone present and for some time it was centered on the group around her. She repeated the question to the King and the Crown Prince who were much amused and looked toward the Prime Minister, who did not look particularly happy at that moment. She said if she did come to America, she would surely come to Boston because she had read much of the city and people. She loved horses and polo, and Boston was famous for the skill of its polo players. She discussed American writers and was of the opinion that Zane Grey was now producing some splendid things in American fiction. During a recent illness of the King she actually kept him alive by reading Zane Grey's novels, and she had been so much impressed with them that she had taken the pains to write the author about his work. I told her of the film, "The Wanderer of the Waste Land" which had been made by Techni-color process, and was proud to say that it had been developed by a former student of mine at the Institute.

She expressed the hope that she might be able to get the film some time for she had in the palace a small theatre for the exhibition of moving pictures.

At the conclusion of the luncheon, the Royal family and the guests went to the large reception room for coffee and cigarettes. As most of the delegates had from childhood thought kings and queens were to be looked at only, they were loath to take the great opportunity presented to get first-hand information in regard to royalty. As a consequence, it fell to my happy lot to continue my conversation with the Queen. I happened to remark that the Roumanian cigarettes were the finest I had ever smoked. The Queen immediately called up a lackey and directed him to bring from her room a box of her cigarettes. When the box was opened later, I found that it contained about 200 cigarettes on each one of which was a facsimile of her signature "Marie."

These rather personal experiences are given to show how gracious and informal a queen can be who has a broad enough point of view to recognize that royalty should not hold itself aloof from the world and the people of the world. I have often read of the great things that the Queen of Roumania has done and my fortunate opportunity to talk with her has convinced me that her achievements are due to unusual mental power and a large supply of common sense.

I was very much impressed with the poise and ability of the Crown Prince. At the formal opening of the Congress he gave a remarkable address. Like every one in Europe, he is anxious to know more of America.

At the conclusion of the Congress, the delegates were taken to the places in Roumania which were of particular interest to chemists. We saw the petroleum refinery of the Standard Oil Company of New Jersey, which is probably the finest plant of its kind in the world. It was constructed after the close of the war and contains all the refinements that have been recently introduced

into the handling of petroleum. We also saw a plant for the fixation of nitrogen, where calcium carbide and cyanamide are made in large quantities. When we were taken to the natural gas wells (in Transylvania which before the war belonged to Hungary) in the mountains over roads impassable for automobiles, the small town turned out in gala costume to greet us, and the natives looked very picturesque in their Sunday clothes. When we were about to leave, it began to rain and I sought the carriage in which I traveled. As this was some distance from the crowd of people, one after another of the natives came up to me and, to my great surprise, spoke to me in broken English. One man, who could hardly make himself understood, declared he had lived in America before the war and had worked in New Orleans. I greeted him as one American should greet another and I was immediately surrounded by a crowd of men who came to tell me they had lived in the United States before the war. They all wanted to come back but the Government refused the permission. One man, since his return to Roumania, had married a girl who said that she would never leave her home. He declared that he loved America so much that as soon as he could he would leave her and come back to the States. My cordiality to my fellow citizens broke down any restraint that existed between us, and I soon found that I was surrounded by mothers with babies in their arms who wanted me to kiss their sons and daughters because they, too, loved America. It was a regular Old Home Week. I was told that at least two hundred of the inhabitants of that vicinity had previously lived in America.

For me to attempt to chronicle the important actions of the Congress at Bucharest would be entirely inconsistent with the request of the Editor to write an account describing the more personal phases of my trip abroad. The chemist can find elsewhere a record of the work done.



THE SUMMER PALACE

Three hours from Bucharest is the summer palace where the King and Queen of Roumania received the fifteen delegates of the International Union

Visiting Committee Reports: I. Electrical Engineering

Report of the Corporation Visiting and Advisory Committee on the Department, published by arrangement with the Corporation Executive Committee

THE Visiting Committee of the Department of Electrical Engineering begs to report as follows:

1. *Introductory.* An Advisory Committee chosen from the electrical industry was appointed by the President, consisting of: J. E. Aldred, of Aldred and Company; C. L. Edgar, of the Edison Electric Illuminating Company of Boston; F. B. Jewett, '03, of the American Telephone and Telegraph Company; Charles Neave, of Fish, Richardson and Neave; Farley Osgood, '97, President, American Institute of Electrical Engineers; Russell Robb, '88, of Stone and Webster, Inc., and G. E. Tripp, of the Westinghouse Electric and Manufacturing Company.

The Visiting Committee, with members of the Advisory Committee, met at the Institute on Wednesday, April 8, 1925, the following members being present: Advisory Committee: F. B. Jewett, Charles Neave, Farley Osgood, Russell Robb; Visiting Committee: Van Rensselaer Lansingh, '98, Franklin T. Miller, '95, Gerard Swope, '95, Chairman.* There were also present Professor Bush and a number of the Faculty of the Electrical Engineering Department.

Statistics were presented giving the registration of the electrical engineering course. These statistics show that 60 of the graduate students, which is 23 per cent of the total number of graduate students, are working in the Electrical Engineering Department, as well as 646 undergraduate students of the Institute, or 23 per cent of the total undergraduate enrollment.

2. *Facilities.* The Committee visited the laboratories, lecture rooms and rooms devoted to research, and were impressed by the good condition of the laboratories and the excellent facilities offered. The Committee raised

the question, without any opportunity to inquire into the details, as to whether the facilities could not be utilized to an even greater extent than they are at present. This will be looked into by members of the

Faculty, and carefully studied before any requests are made for increased facilities, either for space or laboratory equipment.

3. *Staff.* It is, of course, true that, in order that the Institute shall maintain and strengthen its preëminent position in engineering and scientific education, the first essential is that its teaching staff shall be of the highest character. The Staff is discharging its duties with loyalty and intelligence, and the Committee feels that the members of the Staff should in every way possible be helped and encouraged.

The Committee considers that arrangements should be made such that the members of the Staff shall have more time to devote to original research work; their duties are so rigorous and exacting in the line of detailed, routine teaching that they have but little time for such work at present.

If, as suggested, more original research work could be done, this would add greatly to the interest of the members of the Staff in their work, and would not only lead to favorable reaction and stimulation of the students, but also would furnish a basis for papers to be written and published by those carrying on the work, in periodical reviews of the progress of science in each of the lines in which the work is being conducted. Changes in science are follow-

ing each other with such rapidity that such papers would be of great interest not only to the teaching staff and to the students, but also to a much wider circle throughout the United States. They should be expressed in simple terms and so written as to be of gen-

An Announcement

BY arrangement with the Executive Committee of the Corporation The Technology Review will hereafter publish, as they are released, the official reports of the Visiting Committees upon the several Departments of the Institute.

The decision for this publication was made because of the belief that the constructive comment and criticism made by members of the Visiting Committees supplemented by members of the newly created "Advisory Committees," many of them the heads of large industries, will prove of considerable interest and value to the Alumnus anxious to keep informed of the latest developments in scientific and technical education. Many of the material changes in the Institute's curriculum and educational policy are prefaced by the recommendation of the Corporation Visiting Committees, and it is believed that publication in The Review will bring the Alumni into possession of information which would otherwise be unobtainable.

This policy is inaugurated in this number by the publication herewith of the report of the Visiting Committee on the Department of Electrical Engineering. The report of the Committee on the Department of Biology and Public Health will follow in an early issue.

* Of the Visiting Committee W. H. Bovey, '94, and C. A. Stone, '88, were absent.

eral interest, so that they may appeal to a large body and many classes of readers.

It is also deemed highly desirable that members of the Staff should have an opportunity to visit other institutions both here and abroad, spending sufficient time to become familiar with the character of the work done at such institutions and the character of the instruction given.

The previous Committees have also commented on the close relation between the Electrical Engineering Department and the Department of Physics, and how largely the success of the Department of Electrical Engineering is dependent on the character of the work done in pure science and mathematical physics.

In order that an opportunity may be afforded for carrying out the above suggestions, the teaching staff should be so increased that the work of teaching could be distributed over more members. As a first step in this direction, the Committee has secured a pledge for a contribution of \$75,000—\$15,000 annually for five years, to be used in equal amounts by the Departments of Physics and of Electrical Engineering.

4. *Students.* The Visiting Committee was favorably impressed with the character and appearance of the students and their seriousness of purpose. The course of Electrical Engineering has the largest enrollment of any department in the Institute, both in undergraduate and graduate work, and, as has been stated above, it has a respectable percentage of the total enrollment in each of these classes of students. Sooner or later the question of increase in enrollment will be a question of being able to provide adequate facilities, or of limiting the number of students. The Committee thinks that plans should now be devised and put in operation for meeting this situation, rather than to wait until that situation is upon us. To that end, the Committee recommends the following (which has been tried with success at some other institutions) for the consideration of the Faculty and Corporation.

The student must, of course, first satisfactorily pass the usual academic tests.

The student in applying should be recommended by a graduate of the Institute, who shall state something in regard to his impressions of the student's character and qualifications for the work that he desires to enter upon.

The Institute, after careful consideration of these credentials, should ask a graduate of the Institute in the city from which the applicant comes, or in a city located near the preparatory school which the applicant is attending, to see the applicant and after a personal interview write his impressions to the Institute, stating whether the student is average, or above or below the average, and making such other comments as he is in position to make.

It seems to the Committee that, in the light of such information, the best selection can be made of those who are likely to profit to the greatest extent from the courses that the Institute offers. This will also enlist the interest of the Alumni, while at the same time placing no great burden upon them.

The above is preparatory to the student's enrollment. The Committee is also of the opinion that greater effort should be made to seek out the exceptional students and

give them intensive training. The average of the Institute today is admittedly high. If this average can be maintained and still the exceptional student can be developed to a greater extent, the Institute will be accomplishing a very desirable end.

The Committee's definite recommendations in this regard are:

(a) That the exceptional students not only be known by the teaching staff but also be made known to the student body in general.

(b) That the students as a whole, in each department, be grouped in special sections, given courses and instructions suited to their abilities, and that they be allowed to progress as rapidly as they are able.

(c) That all the students be asked, after the first half of their sophomore year, to decide whether they wish to compete for honors, and that the teaching staff coöperate with each student expressing such desire, in coming to a decision as to which line of work is best suited to his personality, character and ability.

To accomplish the foregoing, a larger number of instructors will be necessary; a beginning, and provision therefor, has already been made and is referred to earlier in this report.

A member of the Committee has also agreed that, if this system is adopted and the Faculty and Corporation think it wise, he will be glad to offer three prizes for the honor men each year, beginning with the Year 1925-1926. In the Electrical Engineering Department the first honor will be a Graduate Fellowship either here or abroad, carrying with it \$1000 per year and the second \$500. In the Department of Physics a Graduate Fellowship either here or abroad will be offered, carrying with it \$1000 per year. The conditions of the Fellowships, etc., should be laid down by a Committee of the Faculty of the Electrical Engineering Department and Department of Physics, with the advice and concurrence of the Visiting Committee of the Corporation of the Electrical Engineering Department.

The total amount pledged is \$12,500, or \$2,500 for the five academic years, and it is hoped that if successful it can thereafter be continued.

The Committee also reviewed the courses and respectfully urges, as previous Committees have done, that the courses be carefully studied to make sure that as much detail as possible be eliminated and the courses confined to the consideration of studies of fundamental importance. The Committee regards cultural studies, giving more background to the students, as well as the study of English, to train the student in the clear and precise presentation of his ideas in both written and oral form, as of fundamental importance.

The Visiting Committee is deeply grateful for the interest shown by the prominent men of the industry that it has asked to serve on the Advisory Committee. The meeting was one of such great stimulation that it is recommended that the plan be continued and that we go even further in this direction, so that not only the President of the American Institute of Electrical Engineers, but also those of national bodies such as the National Electric Light Association and the American Electric Railway Association, be asked from time to time to serve on the Advisory Committee.

News from the Alumni Clubs

Southwestern Association of M. I. T.

THE Southwestern Association of M. I. T. held a summer meeting recently, because of the fact that the President of the Association had an opportunity to secure a motion picture reel distributed by the National Aeronautical Association, which he rightly thought would appeal to all Tech men in the city. The meeting was held at the Kansas City Club on Friday, July 24, and was attended by some nineteen men. After a buffet supper the then-President, H. A. Rapelye, '08, called the business meeting to order, and had the then-Secretary, Page Golsan, '12, read the minutes of the last meeting, held in March, 1924.

The minutes were accepted as read, and then Rapelye announced that the next business would be the election of a new set of officers for the coming year, and that for this purpose the chair would be open to consider a motion for the appointment of Theodore Polhemus, '11, as an Election Commissioner. Polhemus appeared somewhat surprised that he should be the goat, but voiced no protest and so the appointment was made. The Chair remarked that this step was necessary for the smooth operation of a plan which had quietly been laid out in advance. Polhemus undertook his duties at once by complacently remaining in his chair and doing nothing save make one motion during the course of the meeting.

The plan mentioned above as having been quietly laid out in advance was unknown to the present Secretary, but, nevertheless, it must have satisfied everybody, for the following officers were each unanimously elected: President, Page Golsan; Vice-President, Arthur S. Keene, '98 (whose absence was due to an accident which fortunately was not serious) and Secretary, Eltweed Pomeroy, '23. Then Rapelye, from the chair, announced, much to the amusement of everybody and the surprise of Polhemus, that a motion was in order for the discharge of the Election Commissioner.

After the meeting there followed a short period of general talking and after-dinner cigars before the six reel film started. The earliest graduate of the Institute to be present was J. C. Sunderland, '83, IV, and the latest B. W. Crenshaw, '24, II. Others present represented classes from '07 to '23. It was a pleasure for all of us to be together and become better acquainted, and before the meeting broke up everyone agreed that a regular monthly meeting at noontime would be something we could look forward to in the future. This decision, however, was made after we had viewed the pictures on the history of aviation, which depicted the development of aircraft from the first flight of the Wright Brothers in 1903 to the present day Air Mail service and the round-the-world flight in the Douglas machines, built by a Technology man. Everyone enjoyed the pictures, so our last official act was a vote of appreciation to Rapelye for his good services.

ELTWEED POMEROY, '23, Secretary,
Great Western Portland Cement Co.,
410 Land Bank Bldg., Kansas City, Mo.

Technology Club of Eastern New York

The Club held its first fall luncheon and guest reception in the Hotel Van Curler coffee room on September 10. The speaker was Dr. Owen D. Young. The subject of his informal talk was "The Engineer's Relation to the Community in which He Works." The speaker warned against the danger of over-specialization and urged the need for more adequate development of the social sense to correspond with the very advanced state of the technical art. Huge sources of power, said Dr. Young, may change from instruments of great economic benefit to agents of destruction if the men to whom their control is entrusted lack the responsibility for their safe manipulation. Dr. Young's whole talk, while enjoyably impromptu, carried with it a significant hint of the necessity for all citizens to give thought to their wider relations to the community rather than to their immediate and narrower environment alone.

E. D. Harrington, '18, as President of the Club, presided at the meeting. The Club itself was represented by a record gathering, among

the Alumni being Gerard Swope, '95; W. D. Coolidge, '96; W. R. Whitney, '90; and A. G. Davis, '93, of the General Electric Company; and a large number of guests, many of them wives of the members. Mr. Harrington outlined the plans for several future luncheons of the Club, promising to obtain Mr. Swope, Dr. Whitney and others as speakers.

Dr. Young's speech was followed by some humorous remarks by Mr. Davis, deploring the fact that Dr. Young was not a Technology graduate, but voicing the general satisfaction that he had been able to attend the meeting. Enthusiasm reached its peak when E. A. Baldwin, '96, led a regular college cheer for Dr. Young.

The second meeting of the Technology Club of Eastern New York was held at the Mohawk Club, Schenectady, September 22. For a considerable period of time the Club has devoted its attention to the problem of increasing its contact with the Institute. One of the methods which it has taken to accomplish this end is a determined effort made by the Club to become intimately acquainted with local students attending the Institute. To this end all local students, starting in at the Institute this year, whether freshmen, upper classmen, or graduate students, were invited as guests of the Club at this meeting.

Dr. Whitney outlined his idea of coöperation with Technology and the desirable results which might be obtained. Vice-President O. R. Schurig, '11, extended an invitation to all local students to attend all our meetings and luncheons whenever they might be in town, and instructions were given to the Secretary to notify these men of all meetings just as though they were members of the Club. It was further voted that the Secretary write a letter periodically to each of the local students and invite them to express their ideas freely.

One of the definite steps which has been taken by the Technology Club of Eastern New York to promote a closer relationship with the Institute has taken the form of a scholarship fund raised by the members of the Club and offered, through the medium of the public schools, to local students who would like to attend the Institute. This fund was first raised in the past year. Much enthusiasm was shown by local Club members and our interest and best wishes go with Mr. Oswald Karas, '29, as he leaves this fall for his college work. While the fund thus raised covers the tuition and laboratory fees for one year only, if the results of this experiment are as favorable as expected, we anticipate no difficulty in offering this scholarship in successive years.

G. A. CHUTTER, '21, Secretary,
1 River Road, Schenectady, New York.

The M. I. T. Association of the Philippines

We greet our fellow Alumni as members of the youngest local association approved by the Executive Committee of the Alumni Association. Coincident with the big Jamboree Dinner in Boston, on the evening of June 11, an informal dinner was held at the Cosmos Club, here in Manila, with eighteen Alumni present. After the dinner we talked over the possibility of the M. I. T. Association of the Philippines. This met with unanimous approval, the association was formed and the following officers are now operating: President, Richard McKay, '21; Vice-President, Aubrey P. Ames, '19; Secretary-Treasurer, Capt. George E. Lamb, '24; Executive Committee, Prof. E. R. Hyde, '06, Dr. Manuel Roxas, '15, Lieut. S. P. Mills, '21, Emilio del Prado, '25.

We have nearly three score Alumni in the Philippines and already we have issued a directory. We are indebted to Lieutenant and Mrs. Mills for the gray and red covers, including the airplane view of the Institute on each. We have been notified that our organization has been approved in accordance with the by-laws of the Alumni Association and we have registered a cable address "Masstech" with the Commercial Pacific Cable Company.

We have had several meetings of the executive committee at which plans for the future have been discussed. The second general meeting was held at the University Club in Manila on the evening

of July 13, at which Mr. Arthur B. Fischer, director of the Bureau of Forestry, told of the work which the Bureau is doing in the Philippines.

The executive committee has recommended that dues be fixed at two pesos per annum for each member and it is our object to maintain an association for the pleasure and benefit of each one who has enjoyed the advantages of Technology.

GEORGE E. LAMB, '24, *Secretary*,
Windsor Hotel, Manila, P. I.

Technology Club of Rhode Island

The affairs of the Technology Club of Rhode Island will be directed during the coming year by the following officers: President, Norris G. Abbott, Jr., '20; Vice-President, A. C. Dickerman, '05; Secretary-Treasurer, L. E. Knowlton, '16; Representative to Alumni Council, A. E. Hatch, '91.

Instead of holding monthly meetings, as has been the custom for the past few years, it is proposed to hold four or five meetings of particular interest during the coming year. One of these meetings will be a golf tournament followed by an informal dinner at the Wannamoisett Country Club. This will probably be held the latter part of October. In January the annual bowling tournament will be held at the To Kalon Club in Pawtucket. It is planned to have a meeting in March, which will be an informal dinner followed by a theater party. The annual meeting, which will be held in May, will be an All-Tech night. It is hoped that some of our good friends at the Institute will be with us on that occasion and that Dennie can be prevailed upon to lend us the films taken at the All-Technology Reunion. The Meetings Committee guarantees that these meetings will prove equally entertaining to the high brows and the low brows.

L. E. KNOWLTON, '16, *Secretary*,
% Providence Gas Co., Providence, R. I.

Technology Club of New Hampshire

On June 28, the members and friends of the New Hampshire Technology Club gathered at Three Rivers Farm, Dover, N. H., as the guests of E. W. Rollins, '71, for their annual summer outing. In spite of threatening skies there were one hundred sixty-three people present, one of the largest crowds on record.

In the morning a fast ball game was played, nearly all of the players lasting the full nine innings. Dennie's team carried off the honors to the tune of 24 to 8. In the winning lineup were Rhind, MacKinnon, Estabrook, Holden, Everett and Pearson. The other team, captained by Professor S. C. Prescott, included Robinson, Ford, Bunker, McKenzie, Russell, and Gould. Much talent was shown by both teams. Before and during the ball game light refreshments were served in the dining room to sustain the players and others until dinner should be served.

Occasional showers necessitated holding the big dinner indoors, so the tables were set up in the barn and carriage house. A real shore dinner of steamed clams, broiled live lobsters, and other good things was served, while songs and cheers echoed throughout the building.

Entertainment was furnished by a hooded band labelled "B. B. B." (Bold Bad Bondsmen) who, led by Dennie, recognized despite his disguise, sang special songs prepared for the occasion and presented J. W. Rollins, '78, with a huge seal showing a picture of the well-known Beaver.

There was a goodly array of speakers on the program in the afternoon, but, following the example of the first speaker, Mayor Morrison of Dover, all the speeches were cut to a minimum length. The crowd assembled in the carriage house after dinner with J. W. Rollins acting as master of ceremonies. The others who said a few words beside Mayor Morrison were President Stratton; Senator Moses of New Hampshire; Mrs. Dismukes, wife of the commandant of the Portsmouth Navy Yard, speaking for the ladies; William Todd, Vice-President of the Maine Technology Club; Captain Hugo Osterhus, representing the Navy; Professor R. H. Richards, '68, from the first graduating class; Everett Morss, '85; A. O. Roberts, '85, Vice-President of the New Hampshire Technology Club; Secretary Denison; and Ike Litchfield, '85, poet laureate of these outings, who read another of his famous poems composed for the occasion.

The day was unusually successful in spite of the weather, which was unfavorable for the first time in ten years of such gatherings. This outing, given every year by "Dad" Rollins, has become famous among the graduates who live near enough to attend and is known as one of the most enjoyable Alumni functions of the year.

A. R. HOLDEN, '23, *Secretary*,
Y. M. C. A., Manchester, N. H.

Rocky Mountain Technology Club

We have had two affairs lately, the first being on September 2, when we had a moonlight beefsteak fry on Lookout Mountain. Twenty of us quite enjoyed the wonderful moonlight evening in the mountains with the lights of Denver on the plains in the distance.

On September 27 we accepted the invitation of Orren Allen, '93, who is stationed at the Moffat Tunnel, and went through that big undertaking from the East Portal, going about two and a half miles underground. They are making wonderful progress and it was certainly an interesting thing for all to see. The ladies were not supposed to go under but some of them put a dent in Allen's heart, which had previously proven invulnerable, and gained special permission. There were forty-four of us in the party and everyone had a good time. The motor trip of 140 miles was made without mishap and was quite spectacular with its views of the mountains in their autumnal colorings.

We passed a resolution extending condolence to the poor benighted souls living elsewhere than in Colorado, with the wish that more of the same would come from Massachusetts and pay us a visit in Colorado. We also held a business session and an election. President Rudie Fox, '12, adopted the rôle of King-maker and put through his slate of Harold O. Bosworth, '02, President, and Alvah E. Moody, '17, Secretary-Treasurer, without a dissenting voice, except that of poor me.

HAROLD O. BOSWORTH, '02, *Secretary*,
P. O. Box 1107, Denver, Colo.



JOINT OUTING

A total of forty-seven members, wives, and so on, attended the combined gathering of the Dayton and Cincinnati clans

News from the Classes

News from even-numbered Classes is published in issues dated November, January, March and May. News from odd-numbered Classes is published in issues dated December, February, April and July. The only exceptions to this rule are those Classes whose Secretaries have guaranteed the appearance of notes in every issue. These Classes are: 1895, 1896, 1900, 1901, 1902, 1905, 1907 and 1910 to 1925 inclusive. Other Classes adhere to the alternate schedule. Due to necessary limitation of space, The Review is unable to publish lists of address changes of members of the Association. The Alumni Office, in Room 3-209 M. I. T., will supply a requested address or will act as the forwarding agent for any letters addressed to members of the Association in its care.

'88 On August 31 the Class met with a severe loss in the death of Arthur T. Bradlee. For several months he had been obliged to give up his regular duties, but had every expectation of returning to his business in a short time, when his death suddenly occurred at Prout's Neck, Maine, where he had been with his family about a month. He is survived by his wife, who was Gertrude Bemis, to whom he was married October 19, 1896; by a daughter, Gertrude (Mrs. Thomas H. Lanman); and a son, John T., a graduate of Harvard in the Class of 1922. He also left four brothers, Henry G., of Stone and Webster, Inc.; Edward C., of the law firm of Warner, Stackpole and Bradlee; Charles W., and John T. of New York. There are also three sisters. Bradlee was our class President at the time of graduation. He always maintained an active interest in class matters, and enjoyed meeting his old classmates at their reunions. He had served as a term member of the Corporation of the Institute, was active on the Executive Committee of the Alumni Association, and was one of the founders of the Technology Club of Boston. He had a delightful personality, was interested in sports, and on the serious side had rare good judgment which was sought by a number of manufacturing companies who named him on their boards of directors. After graduating he became associated with Harding, Whitman and Company of Boston, selling agents for the Arlington Mills, and others. A few years ago the William Whitman Company was formed and Bradlee became its president, which office he held at the time of his death. He had always been engaged in the textile industry.

The following tribute to his memory appeared in the *Transcript*: "In his death, the community has lost a conscientious, public-spirited citizen, and his neighbors a lovable, loyal friend. He took an alert interest in all public and personal affairs, and was a true and faithful supporter of his church. He was always ready to share another's burden — for to him it did not seem the natural thing to do. A heart so large that none was ever excluded. A loving, faithful husband and a generous, devoted father. To his wife and children he leaves a heritage of a life well lived and a name far above riches. 'To know him was to love him.'"

At the one hundred thirty-sixth convocation of the University of Chicago, the convocation address was delivered by Miss Marion Talbot, Professor of Household Administration and Dean of Women in the University of Chicago. The subject of the address was "The Challenge of a Retrospect." After serving as Dean of Women at the University for thirty-three years, Miss Talbot has just retired. She has been with the University since its founding in 1892.

Miss Talbot was born in Thun, Switzerland, of American parents. She took her A. B. degree at Boston University in 1880 and her A. M. in 1882; an S.B. from the Institute was added to her degrees in 1888, and an LL.D. from Cornell in 1904.

From 1888-1891 she was lecturer at the Lasell Seminary and from 1890-1892 she was an instructor in domestic science at Wellesley. Since joining the staff of the University of Chicago, Miss Talbot has held the posts successively of Assistant Professor of Sanitary Science, Associate Professor of the same science, and since 1905, Associate Professor and then Professor of Household Administration. She is a member of the American Home Economics Association and was one of the founders of the Association of Collegiate Alumnae, having served as its President and, for thirteen years, as its Secretary. In collaboration with Ellen H. Richards, Miss Talbot wrote "Home Sanitation," in 1887. In 1900 she published "Education of Women"; in 1912 "The Modern Household," with S. P. Breckinbridge; and "House

Sanitation" in 1912. She has also contributed a number of articles on educational subjects.

WILLIAM G. SNOW, *Secretary*,
112 Water Street, Boston, Mass.

'90 It was with great sorrow that we received word of the sudden death of Frederick H. Dodge of our Class on August 23. Fred was with us at our Reunion, and seemed to be in perfect health. With your Secretary and others, he talked over the plans for our Fortieth Reunion in 1930, little thinking that he would not be with us again. Fred, with his family, had been at Rangeley Lakes for several weeks, where he was indulging in his usual pastime of golf and fishing. On August 20 he contracted a cold, which developed into pneumonia. He was immediately taken to the hospital, but passed away on Sunday morning, August 23. The funeral was held August 26, at his home in Toledo. Fred has been a prominent business man in Toledo, and a resident of the city for more than half a century. He was Treasurer of the Milburn Wagon Company. Following his graduation from Tech, he returned to Toledo and was an official of the Toledo White Lime Company. He is survived by his wife, Mary Mitchell Dodge, a son, Fred, a daughter, Mrs. Latham Broadwell, a brother, Henry P. Dodge, of the Henry P. Dodge Engineering Company, and two sisters living in Gloucester, all of whom have the deepest sympathy of all the members of our Class, for Fred was one of our most popular members.

Our Class has been well represented in Europe this summer. A card was recently received from de Lancey while in Switzerland, Fred Royce arrived home from Europe the middle of August, and John Batchelder about the middle of September. Jack Towne spent the summer in England. John had been under the care of the doctors for some time, and on their advice, with Mrs. Towne, he sailed for England in July, and has spent a most delightful time motoring quietly about the country. It seems that he was in the Phillips House of the Massachusetts General Hospital in Boston about ten weeks, from early April, and it is our regret that none of us knew about it or we would have called to see him. He sailed for home on the *Olympic* September 9, and was very much improved.

The latter part of August, Gary Calkins and Mrs. Calkins, who were at Woods Hole for the summer, got in touch with Mr. and Mrs. Harry Spaulding, who were spending the month at East Bay Lodge (where we held our Thirty-Fifth Anniversary Reunion in June), and they motored to Sandwich, to the Old Mill, which is run by Phil Harvey of our Class, and Mrs. Harvey. Phil gave them a delightful time, and served them with one of his excellent dinners. This winter, perhaps, some of us around Boston can arrange to get together, and drop in on Phil at his quaint but delightful resort at 60 Anderson Street, Boston, back of the State House.

Billy Fenn dropped into Lexington the latter part of August to see his son, and your Secretary had the pleasure of a nice chat with him. Billy has not been able to hit the golf ball much of late because of a lameness in his arm, but he trusts before many weeks he will be back at the game. He expects to go to Virginia Hot Springs in October. Billy's son, William H. Fenn, 3d, was married in June to Miss Mary Hall Cushman. He is in business in Lexington, where he will make his home, and as a result his Dad is likely to drop in there more or less frequently, where a round of golf will be indulged in, including the 19th hole.

John DeWolf and Guy Emerson were called on early in August as experts to testify as to the condition of the building where the

1890 Continued

Pickwick Club collapse occurred. — Frank McDonald, of Pittsburgh, blew into Boston on Sunday morning, August 9, and, thanks to the telephone, connected with your Secretary and came out to Lexington, where they had dinner together at the Belmont Spring Country Club. The rest of the afternoon was spent in talking over old days. — William H. Collins, of the Norwich Branch of the United States Finishing Company, is President of its Mutual Benefit Association. — J. B. Blood was in Boston early in August, and had lunch with your Secretary at the Exchange Club. John is looking as natural as ever. Following the war, he went into the Interstate Commerce Commission in the Railway Department, where he has been until the present time. He has just resigned from that position, and has opened an office as Economist, at 1808 Eye Street, N. W., Washington, D. C., where he is ready to serve clients on matters of valuation, statistics, or engineering reports bearing on railroads or other industries.

Cards have been received from Mr. and Mrs. Henry Plympton Spaulding announcing the marriage of their daughter, Margaret Plympton, to Mr. Rudolf Protas Berle, on October 10. — Mr. and Mrs. Wallace MacGregor have announced the engagement of their daughter, Miss Alice MacGregor, to Albert Lovell Edson. Miss MacGregor is a graduate of the California School of Arts and Crafts, and Mr. Edson is an officer in the Massachusetts Aërial Squadron, and member of an old New England family.

GEORGE L. GILMORE, *Secretary*,
Lexington, Mass.

'92 Once again I find it necessary to announce the death of one of our number. John W. Colby died suddenly of heart failure at his home in Medford on May 27. A short sketch of his life in the *Transcript* says that he was first employed by the General Electric Company on leaving Tech, and then in turn by the Willimantic Linen Company, the New England Structural Company, Stone and Webster, and the Boston and Albany Railroad. In 1909 he became inspector and engineer for the Underwriters' Bureau of New England and in 1924 was made supervisor. He had been for several years in charge of the laboratory of the Bureau which is operated as a branch of the Underwriters Laboratories of Chicago. He married in 1906 and lived in Medford for many years. He was a member of Stirling Lodge, A. F. & A. M., Tabernacle Royal Arch Chapter, Melrose Council, and Beauseant Commandery of Knights Templar.

JOHN W. HALL, *Secretary*,
8 Hillside Street, Roxbury, Mass.

'94 The end of the vacation season brings occasional items of interest from members of the Class who have been traveling in foreign lands, or in remote corners of our own country.

A few days ago the Secretary received a card from Mrs. Darragh deLancey (Miss Gallup) who has been spending the summer in France. She writes from Vichy: "For many years I have desired to see the vast cathedral and the house of Jacques Coeur. They are well worth the twelve-hour journey from here. We are seeing a good deal of provincial France and enjoying the sights. Hotels and railroads are not of the best." It is always pleasant to get these messages from classmates. The Secretary received earlier in the year a similar remembrance from Klipstein.

A note was received a few days ago from Leslie Dana stating that his son George is entering the Institute this year. A few days later son George turned up at the Secretary's office. It is a great pleasure to meet sons of classmates and I hope that all those who are taking courses at the Institute will feel that they can drop in at any time for assistance or just for a talk. Please hand the word on to your sons if you have any here.

Speaking of sons, it is worthy of note at this time that John K. Phelan, son of Phelan, '94, has been made an instructor in Physics at the Institute, and is also working toward an advanced degree. There are doubtless a number of other sons of '94 men at the Institute.

The Class will be deeply grieved to learn of the death of Kenneth Wood which occurred on September 22. Wood has been such a quiet man in his work that most of us did not realize the scope of his activities. The following clipping from the *Providence Journal* gives a fairly complete account of the man and the part he played in the business and philanthropic life of Providence and vicinity: "Kenneth Foster Wood, Treasurer and Director of the Sayles Finishing Plants, Inc., an officer or director of many other large textile concerns and an active worker in philanthropic projects, died yesterday afternoon at his home at Nayatt Point, West Barrington. He was in his fifty-third year. . . .

Mr. Wood's principal philanthropic interest was in the Memorial Hospital in Pawtucket, founded in memory of the wife and son of William F. Sayles. He gave generously, but always avoiding publicity for his munificence, to a number of the charities in Pawtucket and Saylesville, where his principal business interests centered. He was the moving spirit of the Saylesville community projects, fostered by the great textile industry for its employees, who comprise the greater part of the population of that section.

"Mr. Wood was a director of the Rhode Island Hospital Trust Company of this city and the Chase National Bank of New York. He was President and Director of The Wauregan Company of Wauregan, Conn., Vice President and Director of the Hamlet Textile Company of Woonsocket and the Slater Yarn Company, Crown Manufacturing Company, and Union Wadding Company of Pawtucket, and director of the Moshassuck Valley Railroad of Saylesville, Ponemah Mills of Taftsville, Conn., American Bleached Goods Company of New York, and Pawtucket Boys' Club. He was a trustee and executor of the Frank A. Sayles estate and trustee of Memorial Hospital."

Ever popular with all his classmates, the warmest sympathy will go out to his family and business associates."

SAMUEL C. PRESCOTT, *Secretary*,
Room 10-405, M. I. T., Cambridge, Mass.

'95 The Pencil was passed to your humble Secretary in the wake of the most successful, delightful, and enjoyable Thirtieth Reunion of the Class of '95, and the story of this event is yet to be told.

Well, fellows, Bourne — dear Bourne — has "passed away" to Europe, to gambol on the greens of England and Scotland; to wade in the waters at Deauville; to revel in the placid life of Paris; and to recuperate in general from the strenuous task of putting across the great plans for the memorable Reunion of our Class.

He will return — we hope — in late September, much refreshed and invigorated to pick up his business at 177 State St., Boston. Let it be recorded, however, that Frank Bourne worked diligently and incessantly for months on the Reunion and for the great All-Technology Reunion. His family missed him much. We owe him our deepest gratitude.

And there were others. Fred Hannah, our ex-President, was the runner-up and cared for the mathematical computations, plotting of curves, checking, systematizing, and averaging the daily performances of progress. Wally Brackett has placed a gold star in the wreath of achievement by handling so successfully the many details of the greatest of Technology banquets. We are all proud of Wally. Also there is Whorf, (Our Harry), who performed no mean job in pulling off the world renowned event at the Harbor Excursion, when he presented our celebrated classmate Zizziter, and his inventions. P. T. Barnum was the greatest showman only until the advent of Whorf, for Whorf not only fooled the Government, State, and Municipal officials, but he fooled the Faculty and *you* too; and did it so well that it was thoroughly enjoyed by all.

Our beloved Tom Booth must also be mentioned as he contributed largely to the glory of '95, during his successful past administration as President of the Alumni Association. He is still active in class interests, as he has assumed the Presidency of our Class for the ensuing term of three years. You will find Tom true to his trust.

To those who had the privilege of attending our Thirtieth Reunion, the memories of the pleasantries and associations will never be forgotten. You who could not attend, we assure that you were in our thoughts, with the sincere hope that none may be missing at our next great reunion — the Thirty-fifth.

Ninety-Five's Reunion really began on Wednesday morning, June 10, when Bixby, from Detroit, blew into the Hotel Bellevue, and Wray with Mrs. Wray came in from Rochester. The Bellevue had been selected as Class Headquarters in Boston during the two days of the All-Technology Reunion, and most of the out-of-town members had rooms there. A Class Breakfast on Thursday morning was well attended, after which all went to the Institute to register. Arrival at Tech started with glad hand-shakes and the most pleasant "hellos." Guessing matches were numerous along the esplanades and in the corridors of the Institute. Strange, too, some were recognized only with their hats on, and some with their hats off. Time has changed our features somewhat, but never our spirits, and each reunion binds stronger the ties of friendships made during our school days.

After the Luncheon at the Institute, which was followed by the President's Reception, all but Canfield and Schmitz reported promptly for the great banquet. However, these two New Yorkers managed

1895 Continued

to get past the guards and started an overflow table to care for the more belated. We all looked well in our striking head-gear, which added a uniform color to our genial good looks. Ninety-Five has always been known as a handsome class, and we were pre-eminently so on this occasion.

The following day was given to the great Harbor Excursion, where '95 shone brightly again in their Orange Smocks. Upon the return to Boston we found Louis Rourke's Cavalcade of Transportation Busses ready for the high speed trip to Plymouth, where we sojourned at the Mayflower Inn on Saturday and Sunday, June 13 and 14.

The general reception committee was on hand, consisting in the main of Commodore Ned Huxley, Coxswain Frank Bourne, and Midshipman Fred Hannah, who spread themselves in a fashion reminding one of "Old Home Week." Plymouth was again in its glory for it had the honor of entertaining one of the greatest classes of the Institute.

Now we were not selfish about owning the Mayflower Inn, for we summarily directed that the best beds, rooms, and baths must be reserved for our brother-classes, '04, '10, and '20, who were to feast and abide under the same roof, at the same time. Possibly for this reason or other reasons, we soon were compelled to hold a "Symposium on Hotel Housing" to still the few small complaints that emanated from the upper floors through the stillness of the night.

Friday evening we enjoyed in dancing, music being rendered by the Brown Orchestra of Plymouth. We are indebted greatly to Brown, '95, who led this charming aggregation of splendid musicians. Brown lives in Plymouth. He is an artist in his profession and demonstrated his ability in the wonderful selection and rendition of both the classic and the jazz. So fascinating were the strains that it was near to impossible to get a quorum to hold our annual class meeting. The next day, Saturday, opened with many of the field events. Golf, quoits, bathing, hiking, and sight-seeing trips were indulged in by their respective enthusiasts. The swimming fiends—ten of them—were out for their early morning dip before breakfast, and Ned Huxley won the cup by being the first man under the influence of water. The Plymouth Country Club with its eighteen hole course was well patronized under the golf leadership of Hurd. There were a few left, however, who followed the less strenuous sport of sitting on the veranda.

Saturday evening, until eleven o'clock, was given to a fancy dress party, in which the classes of '04, '10, and '20 joined with us. Then followed the event of events: "The Canfield Mock Trial." This trial was conceived by Arthur, abetted by Ned Huxley, and the stage was set for the trial of one Johnny Moore as culprit. John Moore was indicted for contempt of court and was immediately jailed in the dungeon,—the great fire-place. Court was promptly assembled by Judge Sanborn, with Tom Booth as prosecuting attorney and Ned Huxley as counsel for the defense. Arthur Canfield was then sworn in as clerk of court. The New York sheriff was Frank Schmitz. Some difficulty was experienced in choosing the six lady jurors, as most of them were personal friends of the defendant. For this reason we desire not to mention names. Frank Miller is to be complimented upon his loyalty toward the defendant, as some years past Johnny borrowed a nickel from Frank and under such an obligation Frank refused to testify against him.

At the drop of Judge Sanborn's gavel, Sheriff Schmitz produced the prisoner and presented him to court and the case was under way. The suaveness of the counsel for the defense, and the subsidizing of the lady jurors, aided greatly in freeing Johnny. Only through the persuasive efforts of the judge in compelling the defendant to render a new interpretation of the term *Erin-go-braugh*, was the verdict of Not Guilty rendered. Great was the rejoicing!

At the class meeting, Tom Booth, the new President, was inaugurated. The new Secretary-Treasurer received his pencil the next day. Sunday morn followed and all were on deck again. By 3:30 in the afternoon the last group waved a longing farewell to the Mayflower Inn, where the great Thirtieth Reunion of the Class of '95 had passed into memorable history.

Gleanings from the aftermath: Seventy-four men and women attended the banquet. Forty-eight class men were at the Mayflower Inn, with sixteen wives, two daughters, and four sons. Gerard Swope left Saturday morning to meet a previous engagement in the far West. F. A. Park, with his daughter, Marjorie, and son, Franklin, Jr., motored from his summer residence at Buzzards Bay to have breakfast with us on Saturday morning. H. E. Davis was on hand with his son. Frank T. Miller and Mrs. Miller had their son Richard with them. Richard is preparing for Williams and Tech so keep your eye on him.

Tom Booth was on hand for a look-in. Tom had some job to perform by driving Mrs. Booth to Northampton on Friday night where their daughter graduated from Smith College. On Saturday morning he drove to Plymouth to enjoy our atmosphere for the night, returning to Northampton on Sunday. Tom is certainly one of the loyal '95 men.

William Winkley registered with his son. Willie brought his thirty-four year old "Military Suit" complete, and looked well in this sacred costume. He was sufficiently trim and handsome to have served as Master Bell-Hop to the greatest dignitary of any nation. We are certainly proud of Willie. Walter and Mrs. Brackett had their daughter, Phyllis, with them and all the boys enjoyed meeting her immensely; they want her to come again. We hear the rumor that many of our Classmates can not attend another reunion unless they bring the ladies. Good judgment! We trust they may be with us in the future.

The following members of the Class and their guests attended the Reunion at Plymouth: E. C. Alden, Hartford, Conn.; R. B. Brown, Plymouth; Mr. and Mrs. F. A. Bourne, Boston; G. L. Bixby, Detroit, Mich.; Mr. and Mrs. W. C. Brackett and daughter, Boston; T. B. Booth, Boston; G. A. Cutter, Dedham; F. B. Cutter, New York; E. H. Clapp, Boston; Mr. and Mrs. W. S. Chase, Boston; A. L. Canfield, Somerville, N. J.; S. K. Clapp, Grand Gorge, N. Y.; S. S. Clark, Boston; Mr. and Mrs. P. M. Churchill, Elmwood; George Defern, Newton; H. E. Davis and son, Glen Ridge, N. J.; Mr. and Mrs. A. W. Drake, Plainfield, N. J.; Mr. and Mrs. B. C. Donham, Glen Ridge, N. J.; Miss Emery, Boston; J. H. Gregory, Baltimore, Md.; J. Humphreys, Dedham; F. A. Hannah, New York; E. H. Huxley, Elmwood, N. J.; E. L. Hurd, Milton; Mr. and Mrs. H. D. Jackson, Newton; T. M. Lothrop, Chicago, Ill.; E. J. Loring, Washington, D. C.; Mr. and Mrs. C. E. Littlefield, No. Wilmington; Mr. and Mrs. Maurice Le Bosquet, Chicago, Ill.; Mr. and Mrs. F. T. Miller and son, Auburndale; G. Matthes, New York; J. D. Moore, New York; Mr. and Mrs. Reid McManus, Moncton, New Brunswick, Canada; Mr. and Mrs. Ira C. Nay, Auburn, Maine; F. A. Park, son and daughter, New York; W. D. Parker, Reading; F. L. Richards, Boston; F. C. Schmitz, New York; Gerard Swope, New York; Mr. and Mrs. C. B. Sanborn, Norwood; W. F. Stevens, Boston; F. H. Wiggin, Scarsdale, N. J.; Mr. and Mrs. Charles Wray, Rochester, N. Y.; Mr. and Mrs. J. C. Wolfe, New York; Mr. and Mrs. Roger Williams, Canton; W. H. Winkley and son, Medford; W. S. Williams, Norton; L. K. Yoder, Ayer.

The only losses reported at the Reunion were a bottle of hair tonic by Laurie Hurd and a tooth brush by George Defern.

Your Secretary begs to express at this time the thanks of the Class in general for the most generous financial support rendered in order to make the Reunion a success, and especially to those who contributed and were not able to attend. The plan consisted in voluntary subscriptions toward a general fund to defray the extraordinary expenses incident to such an occasion, and to lighten the burden of transportation of some who came from a great distance. The plan worked out splendidly and credit is due to those who conceived and executed it so successfully. Personal subscriptions were received from thirty-four men, and seventy men paid registration fees.

Ninety-Five men will keenly sympathize with Reid McManus, of Moncton, New Brunswick, in the death of his wife, Margaret McDonald McManus, on July 14 at Montreal, Canada, where she had gone for medical attention. This sad news will come with a genuine shock to the '95 men and their wives who were at the June Reunion at Plymouth, for Mrs. McManus won the affection of everyone there by her inexhaustible spirit and sparkling wit.

When it was learned that June 14, the final day at Plymouth, marked the twentieth anniversary of their wedding day, there was held immediately an enthusiastic celebration in their honor. Besides her husband, Mrs. McManus is mourned by seven children, the youngest of whom is aged four.

Gerard Swope, President of the General Electric Company, told the American Institute of Electrical Engineers, last May, in urging the electrification of the railroads of the United States, that if only one-half the railroads were thus equipped the saving would be 40,000,000 tons of coal, or \$120,000,000 annually. He also urged standardization of railway equipment to save hundreds of millions annually.

Sidney K. Clapp, assistant engineer of the New York Board of Water Supply, has practically made his home in the Catskill Mountains, as he has been in direct charge of the vast program of local sanitation by which the waters of 600 square miles of territory are kept free from pollution. The water supply of New York City must be

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properly guarded and cared for and Sidney Clapp is contributing largely to meet the "thirst of New York City."

We have Al Lapf's letter of July 10, in which he tells us that he was sorry he could not be with us. We recognized this in his handwriting and missed him very much. He tells us also of the Santa Barbara earthquake. Al has a large orange and lemon ranch in California and says, "Sometimes they grow and sometimes they don't."

Alfred P. Sloan, Jr., President of the General Motors Corporation, announced during July last that the merger of the Yellow Cab Manufacturing Company with the General Motors Corporation was made to enable the General Motors Company to enter the omnibus field. Motor coaches, taxicabs, and trucks of from one to seven tons' capacity will be manufactured.

We desire to express at this time to the Class of '02 our sincere regrets that we were unable this year to renew the friendships experienced during the past few years on the occasion of our ensemble reunions. This year the All-Technology Reunion unfortunately interfered. We trust we may meet together again in the near future.

The Secretary asks the '95 readers of *The Review* to notify him of any errors or omissions in this or future reports. Do all the kicking possible from time to time so that he will know you are alive. The Secretary is new and has a clear conscience, but a thick hide.

LUTHER K. YODER, *Secretary*,
Chandler Machine Co., Ayer, Mass.

'96 The Secretary reports that he personally was on the job at Technology until early in August and then went to New Hampshire for that month and in September made an automobile trip to Canada, returning to the Summer Mining Camp in New Jersey to give a week of instruction from September 15 to 22 and is now back on the job again with the opening of Technology on September 28. The Assistant Secretary reports that he was able to get away over week ends during the summer to go down on the Cape and for ten days in August was in Montclair, N. J., with his mother and the other members of the family. Later, in September, he made his annual trip to the family in Tennessee, but was back in harness again in Cambridge the latter part of September. Neither the Secretary nor the Assistant Secretary saw any classmates this summer, although the Secretary, in his travels, hit within two miles of Ben Hurd at Nutley, N. J., and within about the same distance of Bert Spahr at Egremont.

Billy Anderson sent his family on from Cincinnati to Biddeford Pool, Maine, for the summer as usual and was able to join them himself for three or four weeks during the latter part of August and the first part of September. — Jacobs has kept the Secretary posted regarding his progress in his automobile trip across the country with his family. He put the auto on the boat at Buffalo and went thence by water to Duluth. Being particularly interested in mining and metallurgy he visited the iron district of Minnesota, the gold district of the Black Hills, South Dakota, and the last report was from Anaconda where he had seen the mines and smelters and was just leaving for the Coeur d'Alene district of Idaho.

The graduation exercises in June had a special attraction for Bert Thompson as his son received his degree in Course II. Bert and Mrs. Thompson were present, of course, and the Secretary understands that the boy will be associated in Bert's business.

In accordance with the vote of the class, the Secretaries made a trip to Rev. Mr. Partridge's Church in Dorchester (St. Ann's) and were impressed by the possibilities of doing good work. Partridge's plans appear to be sound but to carry these out as conceived by him will require a large amount of money. However, the work does not have to be done all at once, but can be done step by step. The final result of the visit was that the Secretaries wrote a letter of endorsement of the work, expressing the hope that contributors would appreciate the opportunity for supplying money toward a good cause. This money is all carefully expended by a committee of the parish and accounts are very carefully audited.

Charlie Lawrence had hoped to be able to arrange a business trip which would bring him over to Boston at the time of the Reunion, but this was delayed and he did not turn up until July 10 when he gave the Secretary the pleasure of a call. He reported that he was feeling fine and far better than he had felt previous to his operations of last winter.

Con Young wrote from Washington the latter part of July one of his characteristic breezy letters telling about a previous tea with Joe Clary and of the visit that they had had from Bakenhus, who had motored on from Newport with Mrs. Bakenhus to be present during

the operation upon their daughter, Dorinda, at the Garfield Hospital. Con reports that Jameson was fully cured by his year's residence at Asheville, N. C., and is now back on the job in Washington and is living in the new home at Chevy Chase which he was building when he became ill. Con himself did some more broadcasting from the WCAP station on July 15 when he gave a series of six songs entitled "A Lover in Damascus" by Amy Woodford-Finden. He left the latter part of July for a business trip to York, Pa., with Louis Morse, but he figured that the business would be all completed by noon-time in time for golf in the afternoon. He traveled thence through New York and Connecticut, making a few business calls, and was with Buster Crosby in Osterville from August 7 to 10. He passed through Boston but, unfortunately, the Secretary was away at the time of his passage. His tour included Maine and the White Mountains and delivered them at Echo Camp, Raquette Lake, New York on August 25. Con's special business there was a four weeks' job of hunting for a four-pound, small-mouthed, black bass that slipped off the hook last summer. Report has not yet been received whether this job was successfully completed.

It is with much regret that report is made of two losses from our ranks. Henry Osgood Holland died on January 2, 1925, in Buffalo, New York. He was born on July 8, 1865, in Terre Haute, Ind. His parents were John Holland of Boston, and Elizabeth Philipps Holland of New Jersey. His ancestors came to America from England before the Revolutionary War, one of them, by the name of Dawes, being a signer of the Constitution. He was married in Buffalo, N. Y., on April 20, 1893, to Isabelle Louise Macartney. He leaves two children, Mrs. Harry Colin Macdonald, of Pittsburgh, and Henry Osgood Holland, Jr. He was a member of various organizations, such as the Sons of the American Revolution, the American Institute of Architects, and the Elder Calvary Presbyterian Church, Buffalo, N. Y. Mr. Holland had been architect for many churches in western New York, as well as for apartment houses, homes and commercial buildings. His most important work was the Hutchinson High School of Buffalo. He was of the firm of Holland and Fruauff, which was one of the leading architectural firms of Buffalo.

The following account of Sumner's death is taken from the *Evening World-Herald* of Omaha, Neb., for July 17:

"George W. Sumner, Treasurer of the Fairmont Creamery Company, died this afternoon at his residence, 420 North 48th Street, following a long illness. Hope for Mr. Sumner's recovery was given up several weeks ago. He had been in a state of coma several days before his death. Mr. Sumner was born in Schuyler, Neb., in 1873, and his parents came to Omaha in the late 80's. He attended the public schools here, fitting himself for a course at the Massachusetts Institute of Technology, from which he was graduated. Returning to Omaha, he remained only a short time and then went to Fairmont, Neb., in 1902. There he purchased the interests of Charles E. Walters in the Fairmont Creamery Company, which at that time had its headquarters in Fairmont. He succeeded Mr. Walters as Treasurer of the company, and remained Treasurer up to the time of his death. He came with the company to Omaha in 1907, when headquarters were moved here. With other officials, he was instrumental in developing the business into one of the largest creameries in the world. Two years ago Mr. Sumner's health began to fail. He was forced to remain away from his desk much of the time as his illness grew worse. Mr. Sumner was a member of the University Club, Happy Hollow Club and Chamber of Commerce. He was a Mason and Shriner, and an official of the Unitarian Church. He was among the University Club's most active members, and was a past President. Shortly after returning to Omaha as an official of the Fairmont Creamery Company, Mr. Sumner married Miss Ruth Berry, only daughter of Mr. and Mrs. J. B. Berry, now living at 5121 Cumming Street. Besides his wife, he is survived by three children, Ruth, Mary and John."

Sumner had attended our Fifteenth Reunion at Squam Lake but had been unable to come to our Twentieth or Twenty-Fifth. We had, however, hoped that we would have the pleasure of his company next year at our Thirtieth although Merrell reported last June that Sumner was seriously ill with hardening of the arteries and enlargement of the heart and his recovery at that time was somewhat doubtful.

Merrell himself had undergone a considerable siege. Last October he had an operation which kept him in the hospital for five weeks and about a week after he left the hospital he developed flu and pneumonia which kept him in bed until nearly the first of February. In order to recuperate he went South for the months of February, March and April and even as late as June the doctor was allowing him to work only two hours a day at the office. However, his doctor assures him

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that very fortunately his organs have come through these various troubles unimpaired and that it is only a question of time before he gets his strength back and is in better shape than before.

Eddie Bragg wrote during the latter part of June that he was about to start on his annual vacation around Boston during the months of July and August but would come by motor and stop in the Adirondacks for three weeks and spend the balance of the time around Gloucester. — Myron Fuller has been curbing his wanderlust this summer and has been spending the greater part of his time with Mrs. Fuller at their camp at Easton. Fuller reports that Grabau has been for some time Professor of Geology at the Government University of Peking, China. — Hatch reports that Skip Brackett has quit his ancestral abode in Newton and left the coal business as being too disreputable. His present address is 1183 Farmington Ave., West Hartford, Conn. Thinking that the Secretary had nothing special to do, Wayne proposed him as Representative on the Alumni Council for the Indiana Association and the Secretary was prevailed upon to accept the job.

Progress is being made on the arrangements for the celebration of our Thirtieth Anniversary next year, although there is nothing definite to report. The vote of the Class was for Wianno, but Helen Chamberlain Dodd has come forward with the report that Litchfield, in motor-ing through Vermont, had been much impressed with the possibilities of her Twin Flower Farm at South Newbury, Vt., for a class reunion and Helen has invited the Class to consider this possibility. The only way to settle this question is apparently by a questionnaire which will be put out by the Secretary in the near future.

Some honors have come to the Class indirectly through the fellows. The latest is the election of Dean Harold H. Boardman to be Acting President of the University of Maine, to fill the vacancy caused by the resignation of Dr. C. C. Little. In announcing this election the papers state that Dean Boardman will be in charge of academic administration and that the financial and business matters will be attended to by the trustees, this arrangement to continue until the election of a new President. Boardman's age is given as fifty, and he is reported to be a native of Bangor and a graduate of the University of Maine in '95, before he came to Technology. His present connection with the University dates back fifteen years, during which time he has successively served as tutor, instructor, professor, and dean of the College of Technology. He has provided important surveys and data for the state in water storage, bridge building and road construction tests and it is understood that his name is being favorably considered for permanent President.

Victor Shaw is back in the mining game again and with the recent boom in the stock market the Shaw Mines Corporation, which he has been promoting, has received considerable attention. These mines are located in the San Juan district of Colorado. Newspaper accounts state that Boston banking interests are planning to place the company on broad operating bases. Shaw himself is superintendent and engineer. The property is near Silverton, Colo., and has an excellent producing record behind it. It has been kept in the Shaw family over a very long period and was operated by them up to November, 1907, when poor metal prices forced a suspension.

CHARLES E. LOCKE, *Secretary*,
Room 8-109, M. I. T., Cambridge, Mass.
JOHN A. ROCKWELL, *Assistant Secretary*,
24 Garden Street, Cambridge, Mass.

'98 No notes have been received by The Review Editors from the Secretary of this class for inclusion in the November issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the Class having news or inquiries should address them to A. A. Blanchard, Secretary, at Room 4-160, M. I. T., Cambridge, Mass.

'00 The success of the Twenty-Fifth Anniversary Reunion has been duly chronicled in these pages but echoes of that memorable occasion continue to roll in. Bill Angus stood it for three weeks and then sent in the following: "It is hard to realize that time has slipped by so since my visit to East Bay Lodge and I want to tell you what a splendid time I had. Meeting the fellows, playing with them, and hearing of their activities after a quarter century of separation aroused in me an affection for the Class of 1900 which, I am frank to say, I did not

have when I was begging at class meeting, years ago, for money enough to buy a football for the sophomore team. I enjoyed the good fellowship and the unselfish, high principled fun more than I can describe. You will do me a favor if you will tell that to any one of the fellows you happen to meet."

'Nough said! If Bill's judgment of a good bunch and a good time isn't 100 per cent perfect, then he has wasted his opportunities in Chicago during the last twenty-five years.

Herbert Howe writes in the same vein. "We certainly had a wonderful time. Such a splendid 'get-together and jolly spirit' was remarkable, I think, in this old Class of ours. The 'aloofness' evidently blew out to sea and stayed out. For all you lads who brought it about not enough praise by a great deal was openly and manfully expressed by us all. Some other time couldn't we try it again — ere the hair is all white?"

While in Washington this summer Zeigler ran into Stephen F. Gardner, who in the old days was one of Ziegler's side-kicks in Course II. Gardner is in business in Washington under the name of the Standard Engineering Company. "This concern has for its field the mechanical equipment of buildings, including heating, ventilating, electric lighting and plumbing. Gardner started out with the Architectural Department of the Treasury Department, but when the Department of Agriculture put up that new building filled with laboratories of all sorts of special equipment, they sent over to the Architectural Department for the best man, and Gardner was chosen. This brought him into contact with the man, now his partner, representing the largest contractors, and they started in business after this job was finished under the name of the Standard Engineering Company. They have done a good many well-known hotels, large apartment houses and government buildings, as well as central heating plants for colleges and institutions. They have done a number of public buildings in Washington, one of the most conspicuous being the Lincoln Memorial. They also did the U. S. Appraisers' Store in Boston. Gardner is a director of the Washington Chapter of the A. S. M. E., and also a member of the American Society of Heating and Ventilating Engineers. He is a member of the Columbia Country Club, the Congressional Country Club, University Club, City Club and Lion's Club of Washington, the Engineers Club of New York and all the Masonic bodies."

Every now and then comes news of some of our number, who in the old days were with us too short a time to become well known to us all, but who have gone out and achieved great success. As a Class we are proud of them and insist on sharing with them the glory of their achievements. Such a man is Greenleaf W. Pickard of Newton, Mass., who was with us through our sophomore year as a special student. Those who perused the *Boston Herald* of September 6 noticed under the radio news a half page article concerning the remarkable work done by Dr. Pickard in research on high frequency waves. He is consulting engineer for the Wireless Specialty Apparatus Company, Jamaica Plain, and has private laboratories at both Newton and Seabrook Beach.

"For more than 28 years Pickard has given his entire time to the study of wireless telegraphy. He has been connected with the Wireless Specialty Apparatus Company since the company was organized in 1907 and during his experimental work in the laboratories of this company and in his own laboratory at Seabrook Beach, he has patented approximately ten different radio devices which have improved both broadcasting and reception in radio. Pickard is the inventor of the crystal detector which he perfected during the years from 1902 to 1906. He is also the designer of the radio compass with which he conducted experiments at Seabrook Beach three years ago before giving his discovery to the radio world. Because of his great interest in radio, Pickard has carried on his experiments during his vacation periods at his summer home. For many summers he continued his experiments in an especially constructed laboratory near his summer home, which is equipped with nearly every conceivable type of radio apparatus. At his private laboratory he does no transmitting whatsoever, giving his entire time to the study of radio reception. He says that a problem still unsolved by radio engineers is what happens between the transmitter and the receiver, and it is on this phenomenon that he has been conducting his experiments this summer."

From the Cleveland *Plain Dealer* of last May was clipped the following news item: "Cleveland alumni of the Massachusetts Institute of Technology were recently led on a tour of inspection through the Public Library by F. R. Walker of the Class of 1900, who is one of the architects of the library." The fellows in architecture

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will remember Walker. Since 1900 he has been doing fine work in Boston, New York, Paris, Rome, Pittsburgh and other cities. Since 1906 he has been located in Cleveland.

GEORGE E. RUSSELL, *Secretary*,
Room 1-272, M. I. T., Cambridge, Mass.

'01 The summer's vacation having come to an end, it is the pleasant duty of your Secretary once more to get in touch with the members of the Class. During the summer a number of communications have been received and it is hoped that a still larger number will be received before the end of the calendar year.

The slip sent out giving names of men whose addresses are not available has brought excellent results and a number of the lost lambs are probably to return to the fold. I would suggest that any man changing his address send in to me or to the Alumni Office a brief statement of such change, as we will then be the better able to see that he gets all of the class information as well as general notices from the Alumni Office.

Last spring we had our brief preliminary Reunion which seemed to be a very satisfactory gathering although the representation was small. This year is our Twenty-fifth and in sending out my class notices I asked for an expression of opinion as to the desirability of a celebration for a Reunion. The responses have been uniformly in favor of it and a number of men have written in to say that they will certainly be present if a reunion is held. As a result we will have a general meeting early in the fall to make plans for the gathering. Subsequently notices will be sent to all members of the Class giving details of what has been accomplished and what we hope to do.

B. E. Schlesinger reports that he is Treasurer of the Northern Industrial Chemical Company. Schlesinger was one of the small and earnest band who supported the Institute through the trial of the last All-Technology Reunion. He belongs to the band of veterans of whom, alas, there are but few.

As was stated in these columns earlier in the year, Roger Wight has left his earlier affiliation and is now with the Travelers Fire Insurance Company, as Assistant Secretary of the company and Manager of the Eastern Department. Roger takes exception to my comment on the change from his former to his present employment, but I think that the unbiased will agree with me that it was an entirely logical development.

Philip W. Moore, who was one of the foundation stones of the last riotous orgies at the Institute sends in his address as 1310 Railway Exchange, Chicago, Ill. This does not mean that our Phil has moved from the private road but apparently he is developing a certain degree of gregariousness and offers an address which is more available than his previous splendid isolation. Phil was in New Hampshire this summer, a mere fifty or sixty miles away from the place where your Secretary was laboring, but we were unable to foregather owing to inhibitions of various sorts. Phil writes in under the "Interesting News" caption of the little sheet which is sent out that according to his own reaction he is the most uninteresting person in the world. Those who have been privileged to know Philip in these latter days will not only disagree with his self-esteem but will find it difficult, I fancy, to understand the grounds for his pessimism.

There is a mystery connected with Fred Freeman which I hope to clear up. I send Freddie, as I do the other members of the Class, the various bits of literature which emanate from this office in the guise of class communications. After a long delay I receive a small part of the sheet marked "data" with Freddie's name, his address and the statement that his occupation is unchanged. The rest of the sheet has been cut away, whether by the postal authorities during transmission or by the sender I cannot say. On the back of this sheet I find noted in pencil a number of simple arithmetical problems which I should say dealt with certain intricacies of the personal income tax.

Speaking of income taxes I am informed by one who should know that one member of the Class paid an income tax of \$120,000 this year. I am making careful note of this fact because there are many enterprises which we are carrying on at the Institute which require the expenditure of modest sums of money and under the present benign interpretation of these laws of the United States it is possible for those of large means to make donations to worthy charities and deduct the sum from their income. Should this line chance to meet the eyes of the member cited above it will, I trust, place him in a receptive frame of mind for the request which I shall subsequently proffer for tangible

support for certain worthy enterprises concerned with the welfare of Technology.

ALLAN WINTER ROWE, *Secretary*,
4 Newbury Street, Boston, Mass.
V. F. HOLMES, *Assistant Secretary*,
131 State Street, Boston, Mass.

'02 Lou Cates has been appointed a member of the Advisory Committee for the U. S. Bureau of Mines. This Bureau has been transferred recently from the Department of the Interior to the Department of Commerce, and Secretary Hoover, no longer having the aid and support of our classmate Bill Durgin doubtless felt the need of some other '02 man to see that things went right. The Advisory Committee of which Lou is a member is made up of some of the leading mining men in the country. Its duties are to consider the policies of the Bureau, also the choice of a new director.

Irville D. Waterman, who has been for many years in the Engineering Department of the New Haven Railroad, has recently been promoted to the position of assistant chief engineer. Included in his province in this position is the Central New England Railroad, which is operated by the New Haven. We quote the following from the *Norwalk, (Conn.) Hour*: "Mr. Waterman has been in the continuous employ of the New Haven road since 1904, beginning as transit-man and working up through the various engineering grades. During the past 15 or 18 years he has been in direct charge of much of the important construction work handled by the New Haven company, including double-tracking of various sections of the road and six-tracking of the Harlem River Branch; also the construction, under the direction of President Pearson and Chief Engineer Gagel, of the large classification yards at Cedar Hill and Providence. Mr. Waterman is considered an expert in the elimination of grade crossings, and was appointed by the Governor of Rhode Island as a member of the grade crossing commission under whose direction the elimination of grade crossings through Pawtucket and Central Falls was accomplished a number of years ago."

The *Penn State Engineer* for May contains an interesting sketch of the professional activities of our classmate Harold Everett, who has been Professor of Thermodynamics at Penn State College the past three years. — At Commencement last June Boston College conferred on Miss Mary C. Mellyn, Assistant Superintendent of Schools for the City of Boston, the degree of Doctor of Education. Miss Mellyn has the distinction of being the first woman who has ever received an honorary degree from Boston College. Miss Mellyn's education included work at several leading colleges, among them Technology, and we are glad to count her as a member of our Class. We hope some time to renew acquaintance. — Cards have been received announcing the marriage of Mary Ursula Lewis, eldest of Bill Lewis' considerable family, to Roy E. Smith, of Dorchester. The wedding took place at Foxboro, on September 19. Miss Lewis is a graduate of the Framingham Normal School and taught for two years in the Avery School at Dedham. This makes at least three daughters of '02 who have married. We have yet to learn of any son taking this important step, but we doubtless will ere long.

Ernest McNaughton, of Portland, Ore., was in Boston for a day in September on a brief business trip, although circumstances prevented the Class Secretary from meeting him. He expects to be in Boston again in a few months, when we hope for better luck. — Joe Philbrick spent his vacation on an auto trip in New England. Accompanied by his wife and friends he drove his car to the summit of Mt. Washington on the afternoon of Saturday, August 29. When he completed this arduous drive he found the Class Secretary waiting there to make record of the event, said Secretary and his ten year old daughter, Alice, having climbed the mountain that day via the well-known Tuckerman-Ravine Trail, arriving at the summit an hour before Joe got there.

An issue of the *Retort* is in preparation, taking up the questions of our Twenty-Fifth Reunion and the possibility of publishing a Class Book.

Classmates will be glad to learn that Mrs. Burt Philbrick of Salem, who wore crutches to our Class Reunion, is rapidly regaining the use of her limbs. Mrs. Philbrick suffered a compound fracture of the lower leg two years ago. In attending this serious injury, the doctors did not realize that the bones in her foot had also been damaged, and when the main fracture had healed a lameness developed in the foot. An operation was necessary last spring to correct matters, and at the

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time of the Reunion in June, the foot was still in a cast, which, however, did not prevent the lady from being a live addition to the class party at Rockport. Since the removal of the cast Mrs. Philbrick has made steady improvement and promises to join the dancers at our next Reunion.

FREDERICK H. HUNTER, *Secretary*,
Box 11, West Roxbury, Mass.

BURTON G. PHILBRICK, *Assistant Secretary*,
276 Stuart Street, Boston, Mass.

'04 The Secretary assumes that all readers of The Review have long since returned from their summer vacations and that they have resumed their various occupations with renewed vim and vigor. It is probable, however, that they all felt just as glad to be back at work as did the Secretary when he returned from his vacation.

The amount of material for Class Notes for this issue is somewhere near the average: not as much as some times and more than others.

What is probably the head line item concerns the marriage of our classmate, Daniel F. Comstock. On June 30 Dan was married to Miss Joan Barton, in the Church of the Redeemer at Chestnut Hill. The bride is the daughter of Mr. and Mrs. Charles Clarence Barton, Jr., 51 Crafts Rd., Chestnut Hill, and is a graduate of Oldfield's in Maryland, Class of 1922. Mrs. Comstock is a member of the Junior League and also of the Vincent Club. It will probably be remembered by readers of The Review that the engagement was announced last winter. The ceremony was performed by Rev. John M. McGann of the Grace Episcopal Church of Springfield, and following the ceremony at the church a small reception for the immediate members of the families was held at the home of the bride's parents in Crafts Road. Dan's home address is now 1070 Beacon Street, Brookline.

W. P. Schumacker, who has been in charge of the Santa Barbara unit of the American Smelter Securities Company in Mexico, has been transferred to El Paso, Texas, and promoted to the position of assistant general manager in place of R. F. Manahan, '03, who has resigned.

On July 8 a daughter was born to Mr. and Mrs. Eugene H. Russell, Jr. The young lady's name is Jane Warren Russell, and she is Gene's second daughter.

Robert Dennie has severed his connections with the Lewis E. Tracy Company, Broad St., Boston, and has adventured into the wilds of Florida, there to start the foundation of a huge fortune in Florida real estate.

A clipping from the *Baltimore American* gives us some information regarding a classmate whose name is seldom seen in The Review notes: "From his very first job one of the most widely known consulting and illuminating engineers in the United States he naturally and logically moved along into his present position. He got that first job, as a graduate of Cornell and the Massachusetts Institute of Technology, on the engineering payroll of the Westinghouse Electric Manufacturing Company, with whom he stayed for three years. At the end of this period he made a connection with the Western Electric Company in Chicago, and two years later with the Westinghouse Lamp Company in Bloomfield, N. J. Following this, he took charge of research and engineering work for the Holophane Company in Newark, leaving after several years to take an interest in the firm of Vaughn, Meyer and Sweet, in Milwaukee. But for a number of years now he has been in business for himself in Milwaukee, with an independent consulting practice. — Arthur J. Sweet is his name."

Bill Evans sent in a clipping announcing the fact that W. G. Houskeeper, '05, has been successful in developing a practical method for making an air-tight joint between copper and glass. This development will make it possible to use copper conductors in incandescent lamp bulbs and radio tubes instead of platinum which it has been necessary to use heretofore. Bill states that many members of '04 are well acquainted with Houskeeper and so the Secretary inserts this news item for their benefit.

G. C. Riddell, chief of the minerals division of the Bureau of Foreign and Domestic Commerce, has tendered his resignation to Acting Director O. P. Hopkins, effective July 1. He will shortly leave for the West to examine the plants and properties of an oil company with which he will be associated in an advisory capacity. After a month's reconnaissance of the California, Utah and Wyoming properties of the company, Mr. Riddell will locate in New York as consulting engineer for the Alaska Pacific Coal Company, which has under development an anthracite property in the Bering River field of Alaska.

This closes the Class Notes for this issue. The Secretary congratulates

himself and his readers on the fact that there are any notes at all and hopes for better luck in the future.

HENRY W. STEVENS, *Secretary*,
12 Garrison Street, Chestnut Hill, Mass.
AMASA M. HOLCOMBE, *Assistant Secretary*,
3305 18th St., N. W., Washington, D. C.

'05 Reading over the reports of other class reunions in the July Review made us realize that our report was short. We knew it, but there was a reason. They also furnished the information that ours was the biggest celebration of any class more than five years out. In registration and in attendance at the Jamboree and Marion, we outran them all. We are telling this for the benefit of those who have never attended, for they should realize that '05 Reunions are things they cannot afford to miss and that it will pay them to make very special efforts to be at the next one. Bigger-and-Better is the phrase.

We wish it had been possible to issue a post-reunion *Flivver* to get the story to those who do not see The Review, but our expenses were all that the treasury could stand. We had thought of a collection of reunion photographs for distribution, as in 1923, but somehow the photographers were not up to their usual efficiency and the results were disappointing. We have carefully preserved those received for publication or exhibition in the future.

Reading over the account in the July Review, we thought the list of names looked short, and in checking up found several which we had unaccountably neglected. Please note that Ned and Mrs. Jewett, Myron and Mrs. Helpert and Logan Hill were very much there. And how did we fail to list Charlie and Mrs. Hawkes who are always on hand for the first bugle, and George Jones who drums up patent business in the East whenever we reunite. This time he brought Mrs. Jones and Margaret, who turned out to be one of our best ball players. All the above were at Marion and we hope they will forgive our careless reporter.

The sporting editor failed to get his copy in for the July report. Bill Ball now writes about the golf tournament: "The idea for this tournament emanated from the fertile brain of Barnes and the plan was that each man choose a handicap that would make the net score of the player amount to 71 which was par of the Kitannet course, where the match was held. In order to prevent the picking of too high a handicap a penalty of one-half of the entrance fee per stroke was imposed on all strokes below 71. Fortunately no net scores were recorded below 71, since the course was a particularly tough one. [Bill is always modest.] Barnes, Eichler and Rhodes were tied with a low net of 79 and the final winner as the result of a draw proved to be Rhodes. Yours truly [Ball, you understand] had the best gross with a 93 and a net 80. The record for the course is 78. There were 17 entries in all and everybody appeared to have a good time although I understand there was a lot of cussing by players in trouble on the course. Probably there was no more than when they were at Tech."

In the tennis championship singles, Kenway beat Hadley 6-3, 6-4. In the mixed doubles, Mrs. Marcy and Kenway beat Mrs. Lord and Marcy, score not counted. As Hill reported by wire, Hadley and Hill beat Kenway and Marcy. And it was pretty good tennis at that.

Another omission. We had fully intended to record that Goldthwait had charge of transportation, got the cars lined up with seats for everybody for the voyage to Marion and back. Dissel planned and managed the baseball and sports program, Kenway the tennis and Ball the golf tournament, while Boggs and Strickland put over the dinner and dance. The Class appreciates what they did and extends its thanks to them for making the party what it was.

Motter, Jewett and Crosby arranged a reunion luncheon in New York on May 26 which brought out Allen, Bell, Charlesworth, Crosby, Files, Foughy, Gilbert, Gunn, Percy Hill, Jewett, Landers, Motter, Rhodes, Shaw and Whitcomb all of whom planned to be in Boston for the big time.

Judith Segar arrived in Westerly, R. I., on June 10 so Ralph was able to be in Marion on the twelfth — without the young lady.

The following letter addressed to the Editor-in-Chief of the '05 *Flivver* was received too late for comment in the May number. "Referring to your April issue, Vol. XX, 1, having once been an officer of the class of 1905, i. e., class director of the Freshman Class (when the rest of the Class did not know me so well) I feel I am entitled to complain, to protest, to howl loudly, on account of the fact that the editorial staff of this valuable paper has seen fit to place credence in Marjorie's views; particularly do I complain of her stern views. No wonder the *Scientific American* judged her fraudulent! All of the above, of course,

1906 Continued

is made on the assumption that the twin screw, triple expansion, oil burning, sea going yacht shown offshore from the Casino and labelled 'Hill's' is meant to represent my palatial craft. With the idea of convincing you of Marjorie's faulty vision, I am enclosing herewith a photograph of said yacht and trust that the '05 *Flivver* will now join the ranks of the *Scientific American* and have nothing further to do with Marjorie and go ahead with its regular business of promoting the Twentieth Reunion of '05."

Speaking of yachts, Lloyd's Register lists the "*Mud Hen*", power yacht, Chicago Yacht Club, A. J. Ortseifen, owner.

Fletcher H. Burke announces the renewal in Buffalo, N. Y., of his practice in the design of plumbing, heating and ventilating, electrical work, plans, specifications, inspection and reports, at 681 Ellicott Square. — Edward C. Smith has moved to Cleveland with the laboratories of the National Carbon Company and gives the new address 15726 Clifton Boulevard, Lakewood, Ohio. Radio fans please note that he designed the new Eveready "B" battery No. 486, "Layerbilt". — Raymond E. Bell has moved his offices to the Fisk Building, Broadway at 57th St., New York. — Gilbert Tower has recently moved to Chicago but we have no details. — Bill Green has taken over and is operating a brush manufacturing plant in Glens Falls, N. Y. Bill had a rough time last winter, spending some time at a sanitarium at Mt. Clemons, Mich., and a hospital at Grand Rapids where his tonsils were forcibly removed. He says it turned into a major operation before they were done with him. His address is 238 Glen St., Glens Falls, N. Y. — Herman Gammons, who took the Cine-Kodak at the Jamboree, is with Roberts, Roberts and Cushman, 31 Milk St., Boston. — Capt. R. D. Gatewood is district director of the Shipping Board-Fleet Corporation with offices at 45 Broadway, New York.

A note from Bob Gardner proves that he is still with the Merritt-Chapman-Scott Corporation, First National Bank Building, Wilmington (Port of Los Angeles), Calif. He says to "tell any of the boys that if they get stranded on the West Coast or need any salvage assistance to be sure and call me up." — George Thomas has been made General Superintendent of the Beverly factory of the United Shoe Machinery Corporation and will add this to his duties as President of the United Last Company.

After a couple of years' hiding, Sam Seaver emerges and states that he is manager of the mining department of the Canadian Pneumatic Tool Company, Ltd. "Was glad to have your note which I received on my return from some distant mining camps in Quebec and Ontario. I did not realize that you had a searching party out on my trail. I am very much alive with a wife and a husky, year-old son, 'Sam, Jr.' You can book my address as P. O. Box 305, Haileybury, Ontario, Canada."

Dr. Warren K. Lewis has been elected an honorary member of the British Institution of Chemical Engineers, in recognition of his notable achievements in chemical engineering in this country. The British Institution of Chemical Engineers has, during its existence, elected only five honorary members of which Dr. Lewis and Prince Conti of Italy are the only ones living outside of England.

The following letter from Mrs. Clinton O. Harrington conveys the sad news of her husband's death. "Your letter of March 15 to my husband, Clinton Oakley Harrington, came just after he passed away. He was ill just four days with flu and pneumonia and it was a great shock as he was recovering from an attack of pneumonia in January, 1922. Upon graduating from Tech, my husband was connected with the engineering department of the Union Switch and Signal Company of Swissvale. He left the company to accept a position as assistant signal engineer of the C.M. and St. Paul Railway at Milwaukee in 1907. From there he went to Peter Gray and Sons, Cambridge, Mass., as engineer and after about a year returned to the Union Switch and Signal Company. His work there finally developed into research, and he was made research engineer at the head of a splendidly equipped laboratory. His health was not the best and he resigned in 1921 to go into business in Chicago with J. M. FitzGerald, forming the Aldobilt Company, manufacturing railway supplies. Pneumonia put a stop to this work and we have been traveling in the west in search of renewed health and strength since that time. We purchased a home here [Altadena, California] and were looking forward to many years of happiness in this beautiful country as it agreed with my husband and he was getting better. He passed away March 7, 1925."

ROSWELL DAVIS, *Secretary*,
12 Atlantic Avenue, Beverly, Mass.
S. T. STRICKLAND, *Assistant Secretary*,
26 Pemberton Square, Boston, Mass.

'06 The Secretary is reminded that the time has again arrived when notes are due for The Review. As usual, news is rather scarce and the temptation is great to get another black mark by not submitting any notes. If it were not for an incident which happened at the Pops last June the temptation would be irresistible. However, the writer recalls a conversation there with Mrs. Stewart Coey in which she stated that she always read the notes, when we had them, with great interest, and feels there is a new demand for news which cannot be overlooked.

In the one or two issues last year when we had no notes, but not one '06 man protested, so it is no wonder we get hard boiled about omitting notes now and then. But when we think of disappointing the '06 ladies it is too much and we are forced to resort to extreme measures such as this.

In fact, the Secretary has been giving some consideration to including a few fashion notes in the column. He probably got this idea from the Jamboree where the monologue artist stated that a fashion page would be included in the *Police Gazette* on account of the large number of girls who now patronize barber shops.

With further reference to the ladies, the Secretary would remind them that they are invited to the Twentieth Reunion which we are to hold the middle of next June. In making up the 1926 household budget, please bear this item in mind. The Reunion is to be held somewhere about half way between New York and Boston, to last two and one-half or three days, and will be open to '06 men and their entire families.

Abe Sherman found out that the Secretary and his family were to be in Lunenburg, which is about four miles from Abe's home, on Sunday, September 6, and left a special invitation for us to come over to Fitchburg and see him. We had a very pleasant call with Mr. and Mrs. Sherman at their attractive home in Fitchburg that afternoon. We were sorry not to see the class baby, who happened to be out. Abe exhibited the class cup which shone so as to be suspiciously bright. In fact, Abe admitted it had been polished quite recently.

In the *Engineering and Mining Journal-Press* of May 30, there was a picture and mention of R. P. Reynolds, who is superintendent of the lead smelter of the American Smelting and Refining Company at Durango, Colo.

J. W. KIDDER, *Secretary*,
50 Oliver Street, Boston, Mass.
E. B. ROWE, *Assistant Secretary*,
11 Cushing Ave., Wellesley Hills, Mass.

'07 John A. Davis, who was transferred by the U. S. Bureau of Mines from the Alaska station to Washington, broadcast from station WCAP on February 9 a talk on "Dog Mushing in Alaska North of 64."

Clif Draper left the General Electric Company, at Schenectady, in April, 1925, and has an interest in a concern called "Litho Craft, Incorporated," 156 Van Guysling Avenue, Schenectady, N. Y. For a long time he has had an interest in lithography and its application to modern business, and now this is his life work. — Major Stuart C. Godfrey, U. S. Engineer in Boston for the past two years, left Boston on August 29 for Fort Leavenworth, Kan., to attend the Command and General Staff School. — Frank S. Hamilton is a salesman for the Aetna Life Insurance Company, 31 Milk Street, Boston. — Robert E. Keyes is with the Drying Systems, Inc., 11 South Desplaines St., Chicago, Ill. — John Kimball is now located at 66 Perkins St., Melrose Highlands, and William Lucey is at 1504 East Lake Road, Erie, Pa.

H. J. C. MacDonald is the author of an article, "Effect of Vacuum on Producing Wells," in the *Oil and Gas Journal*, April 9, 1925. — Prescott R. Nichols has built a home for himself located at 365 North Main Street, Reading. — Congratulations to Floyd A. Naramore, who was married on July 30 to Frances Yeomans in Seattle, Wash. His home address is 1630 Boylston Ave., Seattle, and his business address, the firm of architects, Naramore and Menke, ('08), at 631 Central Bldg., Seattle. He is an architect for the Seattle Public Schools. — Marcellus Rambo is living at Avenida Rio Branco 257, Rio de Janeiro, Brazil. — James Reed is at 545 South Norton Ave., Los Angeles, Calif., and Edward M. Richardson is at the St. Anthony Club, 17 West 56th Street, New York City. — Willis G. Waldo's address is 3701 16th Street, N. W., Washington, D. C., and William L. Woodward's is care of Fairbanks Morse Company, Janesville, Wis. — Wal-

1907 Continued

ter B. Gonder is manager of the New York Office of Frederick Peirce and Company, bond brokers, 60 Wall Street, New York.

BRYANT NICHOLS, *Secretary*,
2 Rowe Street, Auburndale, Mass.
HAROLD S. WILSON, *Assistant Secretary*,
W. H. McElwain Co., Manchester, N. H.

'08 We are indebted to Sam Hatch for the following story of our Seventeenth Reunion at Osterville last June:

"The 1908 Reunion was held at West Bay Inn, Osterville, Mass., on June 12, 13, and 14 directly after the Harbor Outing of the All-Technology Reunion and was a success in every way, with perfect weather, and with excellent fare and accommodations provided by our general host, Classmate Crocker.

"Upon arriving at the Army Base from the Harbor Outing, those going to the Reunion proceeded by auto directly, more or less, to Osterville, twenty-one following the trail and arriving in time for a late supper. In fact our able pilots and trail blazers, under the leadership of Hobe Ferris and Tim Collins, did such efficient work in marking the turns with paper cups, etc., that Gianella, a stranger in the district, was able to follow the signs and arrived later in the evening. He reported that all was well when he left the Copley Plaza, much to the relief of Jim Burch and the rest of the gang in general. The balance of the evening was spent in discussing the mysteries of Zizz, as demonstrated at Fort Warren, and other brands. Deputy Sheriff Lang Coffin also told us of the trials and joys incident to hunting Bolsheviks and Maidens in the dungeons of the old fort. And just think: he didn't even have one of those flash-lights along!

"Saturday morning Hobe's fog horn did good work as a breakfast signal and turned the gang out, in short order. After breakfast, smokes and a session of picture taking golf was the main attraction and nearly everyone did at least 18 holes, as a golfer, or caddy, before lunch. The well-remembered pond on the 9th hole retained a number of balls as the caddies claimed they were not paid highly enough to go in after them. After lunch, more golf for the golfers, but with most of the caddies serving as spectators at the tennis court. The absence of the caddy delegation from the golf course proved serious, for without them to keep the score straight the golfers got into a controversy over scores and golfing debts. Hobe and Tim claimed that Lang and George Belcher still owed them seventy cents. Attempts to collect this debt, together with bridge games made up the evening entertainment, although at times the debt question threatened to put all bridge out of business. Tim and Hobe also entertained very successfully during supper. Saturday's arrivals made the total registration twenty-six.

"Sunday after breakfast the golf debts were all settled peacefully and, except for a few of the hardened golfers, the crowd rested up comfortably in the porch chairs. Then a quick swim for some was followed by dinner. After this, the crowd started for home, all with recollections of time pleasantly spent and with resolutions to be on hand three years hence for the Twentieth Reunion."

It is to be regretted that more of the forty odd fellows who attended the All-Tech dinner, and other classmates, too, could not find time or means to go to Osterville for they certainly missed a good time. We hope they will make greater efforts in the future.

The bi-monthly dinners at Walker Memorial will be continued this fall and winter as usual. In addition to a mighty good dinner and a chance to meet old friends, the entertainment committee has arranged a series of special features which all will enjoy. The first dinner of the fall was held on October 20, and the second will come on December 8 at 6:30 p. m., at Walker Memorial. Please try to be with us — you are bound to have a good time.

We have recently received a very interesting article about Jose Gomez taken from a magazine published by the sugar industry in the Philippines:

"Mr. Jose Gomez y Virto was born in Barotac, Iloilo, February 28, 1887. After studying in Japan and in the Nautical School in Manila, he went to the United States in 1903 as one of the first one hundred government students. He graduated from Pomona College, California, and Massachusetts Institute of Technology and afterwards studied agriculture at the University of Wisconsin, specializing on soils and sugar chemistry.

"On his return to the Islands in 1907, Mr. Gomez was detailed by the Bureau of Agriculture at La Granja Modelo Experimental Station at La Carlota, Occidental Negros. Later on he was assigned in rinderpest work and then transferred to the agricultural extension work in cooperation with the Philippine Railroad, Panay and Cebu Divisions.

"Mr. Gomez resigned from the government service in 1910 to manage his own Central and hacienda at La Castellana, Occidental Negros, until 1920 when he was appointed technical adviser of the Isabela Sugar Company, Inc. In the same year he was appointed manager of the Ma-ao Sugar Central Company, Inc.

"Mr. Gomez was instrumental in making Pulupandan a port. He is deeply interested in connecting the northern and southern districts of Negros by railroad, having Pulupandan as its terminal."

Gomez certainly deserves great credit, as the Managership of a Sugar Plantation is a big job. Literally the manager of a sugar mill has to be almost everything to the workers on the estates. Sometimes there are 5,000 to 10,000 whose health and material prosperity are very largely dependent on the capabilities of the mill manager.

We were glad to get the following letter from McDaniel, '17, about Nicholas: "Have just returned with the fleet from Australia and thought you and '08 would like some news of an old classmate of yours — U. James Nicholas. I came to know Nicholas very well while we were in Melbourne and think he is a prince.

"His history briefly is this: After graduation he returned home to Melbourne and took up structural engineering. He is now one of Australia's leading concrete engineers and designers and has made all the money he will ever need. He has a very nice home in one of the suburbs, a very charming wife and one child, Judith. He has rather lost track of Tech and class affairs, but is still very interested and wants to pick up the loose ends. His business address is Stalbridge Chambers, 443 Little Collins St., Melbourne, Australia. It was a great privilege for me to meet him, and I can't say too much for him and his wonderful hospitality."

We understand that Herbert Ellis is soon to be married. Ellis, who is a Lieutenant-Commander in the Navy, is engaged to Miss Cathryne G. Crowley of Charlestown. — The engagement of Miss Ethel Wright, of East Walnut Hills, Cincinnati, was recently announced to Howard Luther. As you know, Luther is head of the Department of Civil Engineering at the University of Cincinnati, as well as Assistant Dean of the Engineering College.

Leland Edward Wemple, just elected president of the Illinois Zinc Company, Chicago, for eighteen months previous had been Vice-President and General Manager of the company. Mr. Wemple first became identified with the non-ferrous metals industry in 1909 as superintendent of smelting operations for the Hoyt Metal Company, St. Louis, which position he held until 1912. From 1912 to 1922 he was assistant manager of the smelters and manager of the oxide department of the American Zinc and Lead Smelting Company. During the next year, he was Vice-President and General Manager. Mr. Wemple patented a process of dearsenizing pig lead and lead alloys and patented a process for refining zinc oxide. He is a member of the American Institute of Mining and Metallurgical Engineers, American Chemical Society, American Zinc Institute, American Society of Testing Materials and various other organizations. Mr. Wemple succeeds Benjamin E. Wells, resigned.

Dr. and Mrs. Willard Travell announced the marriage of their daughter, Virginia Macqueen to Harold Eastman Weeks on Saturday, September 19, at the Church of the Ascension, New York City. Mr. and Mrs. Weeks will be at home after October 15, 1925, at 40 Fifth Avenue, New York City.

Doc Leslie, for many years connected with the United Shoe Machinery Corporation, has recently resigned to become President of the Boston and Miami Holding Company and the Leslie Mortgage Company. His Florida address is 210 N. E. 1st Street, Miami Beach, Florida. He will continue to make his home in Beverly.

H. L. CARTER, *Secretary*,
185 Franklin St., Boston, Mass.

'10 We who were able to experience all the joys of Reunion last June are certainly sorry for those who missed the good time. Although Kenneth Armstrong was in Winchester this last summer, he wasn't able to make New England in time for the Reunion. Ken is a pretty busy man down there in Washington. He is chairman on the Committee of Public Utilities and is manager of the real estate department of the firm of Woodward and Vieth, builders and real estate agents. While Ken missed the big event, he says he had a "small 1910 reunion" one evening last winter when Jack Babcock and V. T. H. Bien blew in to see him.

Another of our classmates who missed the Reunion, after planning up to the last minute to be with us, was Allen Gould. Allen was

1910 Continued

always a live one at Tech, but as a correspondent he hasn't lived up to the reputation he earned in the good old days. To quote Allen's recent letter from Cleveland: "It's a big job to make up for ten years of neglect all in one letter." But he proceeds to do just this in a very admirable fashion. He has seen considerable military service within the past few years. In 1916 he enlisted in the cavalry for the Mexican Border War and stayed in uniform of one kind or another for the next three years. During this time Tyler Carlisle was a sergeant in the same outfit. Returned from this service, Gould found himself detailed with The British Ministry of Munitions in this country on mechanical transport inspections, and until some time after the end of the World War he served in varying capacities, both in this country and abroad. Again back and into city, he pursued automotive activities, and the present time finds him "manufacturers' agent for Wheatley Lewis Company, The Lewis Asphalt Engineering Corporation, on a line of very interesting asphaltic materials." He says that while Buck is still primarily a chemist true to his training, he himself is a long way off the beaten paths of the Course VI graduate. Those of the '10 men whom Gould has chanced upon within the past year are Enfield, Tyler Carlisle, Ralph Gowers, Don Williamson, Gorton James and Stuart Sneddon. We're mighty glad he's reformed and come back to us through the columns of The Review. Keep up the good work and stay with us.

A recent clipping from the book section of the *New York Times* reads as follows: "*Plantin's Index Characterum of 1567*. Facsimile reprint with an introduction by Douglas C. McMurtrie." Mac's an authority on printing types, having designed some himself. — And then too, another one of our classmates has joined the ranks of professors. This time it is Philip G. Laurson, Course I, who has just been made Associate Professor of Engineering Mechanics at Yale.

Another clipping of interest to us appeared in the *Gloucester Times*. It conveyed the news that Herbert S. Gott, who is senior Secretary of the Y. M. C. A. at Reval in Esthonia, visited Gloucester this past summer.

Now, classmates, let's have your letters so we can keep these notes as voluminous and as interesting as possible for the year 1926.

DUDLEY CLAPP, *Secretary*,
15 Draper Avenue, Arlington, Mass.
R. O. FERNANDEZ, *Assistant Secretary*,
264 W. Emerson Street, Melrose, Mass.

'11 Here it is fall again and the boys are streaming into Tech in about double the numbers they did when we entered fifteen years ago. Fifteen years! Aha, that reminds us, our Fifteenth Anniversary is scheduled for the Memorial Day week-end, May 28, 29, 30, 31, 1926 — place to be announced. It is planned to have a 1911 dinner sometime in October and either then or shortly afterwards a committee will be appointed and its makeup announced in the next issue of The Review. Lots of you boys must have ideas on the subject and the "W. t. D." slogan is still quite au fait.

Emmons Whitcomb and his wife, and Fat Merrill and his wife were passengers and prominent ones on their summer's cruise of the Raymond and Whitcomb Company to Norseland. Emmons sent back one of the newspapers published from time to time and there was Fat himself billed as master of ceremonies. — Bob Haslam and his wife also had a splendid European trip during the summer and here is Bob's description:

"I went abroad with a party of engineers from the American Institute of Chemical Engineers, and we were guests of the British Institute of Chemical Engineers, at Leeds, England; we attended a joint meeting of these two societies with the Society of Chemical Industry; visited England, Scotland, Paris, Switzerland, and Southern Germany including the Ruhr. In view of the starting the new Course in Gas and Fuel Engineering, I was greatly interested in this subject, and visited plants in England, Scotland and Germany. I also visited the following educational or research laboratories all of which are carrying out important work in the Gas and Fuel Industry: University of Leeds, Sheffield University, Greenwich Experimental Station, Fuel Research Board, Kaiser Wilhelm Institute for Coal Research, Mülheim am Ruhr. We met a great many people, had a fine time and were gone ten weeks. In closing let me say that I am now proficient in drinking to the health of the King."

In a recent issue of *The Wiley Bulletin*, "issued in the interest of education and devoted to the publications of John Wiley and Sons, Inc.," appears the following tribute to recent efforts of our old friend Aurora Borealis, himself:

"Marcus A. Grossman, an expert in special steel, has translated and enlarged a book on 'Physical Metallography' by the late Prof. Dr. Ing. E. Heyn of Germany. Professor Heyn, who died recently, was an international authority on metallurgy and metallography and had been director of Germany's two leading institutes for metal research, the K. Materialprüfungsamt and the K. W. Institut für Metallforschung. His book has already gone through two German editions.

"Mr. Grossman's experience includes work with the Bureau of Standards, Division of Metallurgy, and more recently, manufacturing and investigative work in special steels."

Here is an interesting story about one of our 1911 electrical engineers, clipped from a recent issue of the *Railway Electrical Engineer*: "Charles R. Stover, formerly in the sales department of the National Lamp Works of the General Electric Company at Nela Park, Cleveland, Ohio, has been transferred to the Sunbeam Incandescent Lamp Division of the same company, as a railroad specialist, with headquarters in Chicago. He was born at Altoona, Pa., on August 7, 1887, and graduated from Pennsylvania State College in 1910. The following year he attended Massachusetts Institute of Technology, leaving the latter institution to enter the engineering department of the National Lamp Works, Nela Park, Cleveland, Ohio, on July 1, 1911. He was transferred to the commercial development department on September 1, 1913, remaining there until February 1, 1923, when he was transferred to the sales department with the same headquarters, in which position he continued until his recent transfer as previously noted."

It will be good news for Eleveners to hear that Oberlin Clark and Ernest Batty, who are now in a partnership known as Clark, Batty and Gallagher, architects and engineers, have been successful in being commissioned by Mayor Barbour of Quincy, to prepare plans for and ultimately supervise construction of a new police headquarters. In commenting on this award recently the Quincy *Patriot-Ledger* said: "Since receiving his degree, Mr. Batty has been connected with architectural and engineering offices, designing buildings and preparing plans for buildings similar to that contemplated for a police headquarters and doing special work for Stone and Webster and other large engineering and constructing concerns. Mr. Clark has been engaged in construction activities, bringing the practical features of building planning into the firm."

I had a nice letter during the summer from Bill Warner, I, out in that dry Oklahoma town, Nowata. He said he was prompted to write by the accounts of the recent Reunion in The Review and it made him wish more than ever that he had been able to attend. He says he has been very busy lately in applying compressed air to oil production methods, both in cleaning out wells and in increasing production. He claims to be securing excellent results and is much encouraged over the outlook.

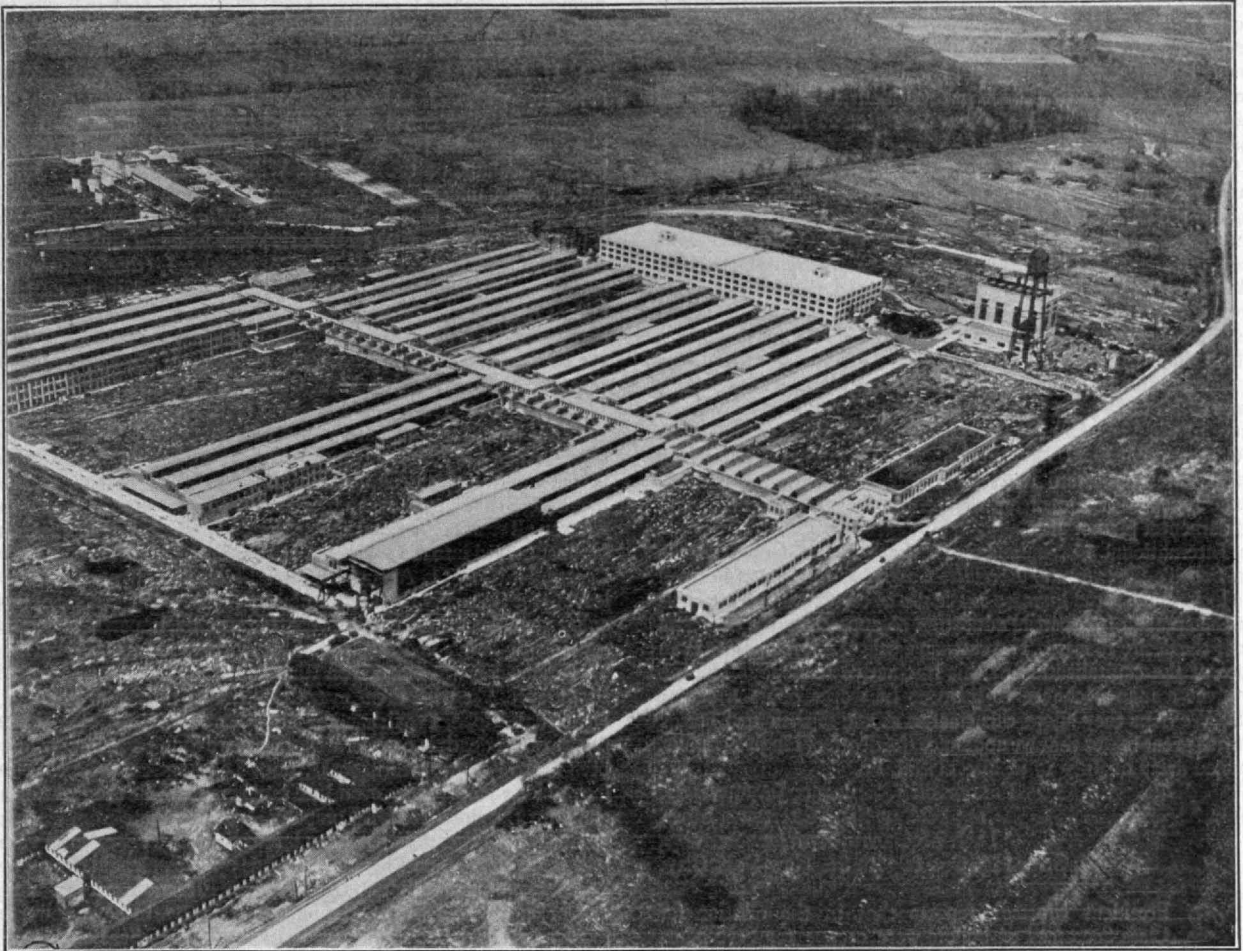
I had a dandy chat with Stu Copeland, II, in August, when I stopped off at the plant of the Eastern Manufacturing Company at Bangor, while en route to the summer camp in civil engineering at East Machias, Maine. He seems to be running yours truly a great race as to who is the grayest member of the Class, although there may be some others of whom we haven't up-to-date knowledge.

We have two Eleveners back at Tech this year for post-graduate work. Walter Arthur, a native of Reeds, Mo., who was here on graduate work last year has returned. And who do you suppose dropped into my office today (September 25) and said "Hello, Dennie"? None other than Paul A. Cushman, VI. He has been teaching for a time at the University of Arkansas in Fayetteville, where he has been in charge of the course in mechanical engineering, but has decided he wants to come back to the best school on earth to get a master's degree in mechanical engineering. Hence his presence here. He and his Mother have taken an apartment in Watertown and Paul says he is looking forward to getting into 1911 activities again.

This seems to complete the picture for this month, but in closing let me once again remind you to check off those dates of May 28, 29, 30, 31, 1926 on your engagement calendar and make the notation "1911 Fifteen Year Reunion — Can't Miss!"

ORVILLE B. DENISON, *Secretary*,
Room 3-207, M. I. T., Cambridge A, Mass.
JOHN A. HERLIHY, *Assistant Secretary*,
588 Riverside Avenue, Medford, Mass.

'12 It is with a great deal of pleasure that we announce the arrival of Mary Agnes McGrath, born September 13. Your Assistant Secretary states that nothing else of like importance has come to his attention from New York and vicinity, which will account for the lack of news from this section.



Airplane View of the Plant of the Dunlop Tire and Rubber Corporation, Buffalo, N. Y.

The Foundation Company, General Contractor

THAT "TIME IS MONEY" IS OFTEN TRUE IN BUILDING PROJECTS. THE SPEED REALIZED IN THE CONSTRUCTION OF THE GREAT DUNLOP PLANT STANDS OUT IN THE FIELD OF ENGINEERING ACHIEVEMENT. THE CONTRACT WAS SIGNED IN JANUARY; THE DESIGNS COMPLETED AND GROUND BROKEN IN MARCH; AND TIRES PRODUCED IN AUGUST; ALL IN THE SAME YEAR

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1912 Continued

R. W. Chandler has left Yale and Towne Company where he was sales manager of their industrial truck division, and has joined the Philadelphia Electric Company as assistant to Mollie Scharff, who is their chief engineer. He is located now in Philadelphia.

Harvey Benson, II, sold his interest in the A. T. Thompson Company and is now with the United Shoe Machinery Corporation in charge of production at their experimental plant, using a new type of semi-automatic machinery. He is now living at 22 Harrison Street, Melrose Highlands.

H. C. Dunbar, who started with us in Course II, and who was forced to leave at the end of his first year, came back a year and a half ago to the Institute and took his degree with the Class of 1925. During his absence from the Institute he was in the south where he was superintendent of the Smithport Extract Company of Helen, Ga.

A. P. Horner, VI, is now with the T. A. Edison Company, Inc., at Orange, N. J.

The *Walham News Tribune*, August 24, announces the wedding of Miss Jean Shaw to Mr. John Leighton Bray, VI. Mr. and Mrs. Bray make their home at 540 Vine Street, Lafayette, Ind., where John is Professor of Metallurgy at Purdue University.

A note in the *Telephone Review*, published by the American Tel. and Tel. states that H. H. Brackett is engaged in engineering work on toll plant extensions, and special transmission studies, embracing telephone repeater studies, transmission maintenance methods, and toll fundamental plan studies.

The International Correspondence School House Organ quotes Weenie Schell's *Technique of Executive Control* as follows: "We need only to look at the rapid increase in the use of correspondence schools and at the spread of industrial education to appreciate the universal extent of the desire to learn. The extensive sale of encyclopedias is an evidence of the capitalization of this instinctive tendency. The job which gives a man a chance to learn as he works offers a strong appeal." We hope they adopt this treatise as one of their text books.

It is with great regret that we announce the death of Hugh E. Soulis, who passed away on July 17 at Drexel Hill, Pa.

FREDERICK J. SHEPARD, JR., *Secretary*,
125 Walnut St., Watertown, Mass.

D. J. McGRATH, *Assistant Secretary*,
McGraw-Hill Co., & 36th St., New York City.

'13 President Mattson reports that in the election for Class Secretary 93 ballots were cast, 1 for Fred Murdock, 1 blank and 91 for Hap Peck. Hap, you're elected! Go to it.

Fortunately, the ballots in the election were not sent to Fred Murdock. If they had been Fred would have read all the pleasant things said to him but the rest of us would undoubtedly never have heard a word of them. After a man has toiled over class notes for twelve years, writing about everybody else in the Class, it is time that he reads something about himself. Accordingly the liberty is taken to quote some of the notes that were intended for Fred.

Ken Blake, XIV, says, "Sorry to see you give up the struggle, Murdock, but here's hoping that Peck is as good on economy as you have been." (Not a chance, Ken.) W. S. Boynton, II, remarks correctly that the new Secretary will be no better than the one we have had. Bill Flanders, I, rises to inquire, "What is the matter with Fred Murdock? He has certainly done a good job as Secretary during the last twelve years." Ken Hamilton moves, "A rising vote of thanks is hereby given to Fred for his faithful service over these many years". (Seconded and unanimously carried.) Larry Hart, XI, expresses the feeling of all when he writes, "Sorry to see you retire, Fred; you have been a faithful Secretary."

Al Smith, VI, says, "Your remarks on the profits of getting together are just right. Over half of life is in reviewing and remembering acquaintances. We are sorry to let you go." (After that, Al, you've simply got to be at '13's Thirteenth next year.) Ben Thomas, VI, tells the new scribe that he "will have to go some to beat Murdock's record." Ralph Thomas, also VI, adds, "Many thanks to you, Fred, for your unselfish service." Bob Weeks, VI, wants to know when you are coming to Phila, Fred, as he is anxious to tell you personally how much he appreciates your labors as Secretary.

Perhaps no one knows better than Fred's successor just how hard it has been for Fred to carry the burden of the secretaryship. His desire to be relieved was justified and although we all regret the necessity to grant him his wish, we do so with sincerest appreciation of his work. It would indeed be easier for the new Secretary if he followed a less worthy predecessor, but the incentive which now exists to strive to

reach the standard that Fred has established would then be lacking. It cannot be done alone; it requires the coöperation of all the class members. Each one is sincerely urged to add his note now and then, and perhaps together we can give Fred somewhere near the fine messages he has so faithfully supplied to us.

F. H. Achard, VI, is now located in Boston, selling securities. He is associated with B. J. Baker at 209 Washington St. He has given up his dreams of foreign travel, and decided that in Boston he will live and move and have his beans. — Clarence Brett, I, and Mrs. Brett are to be congratulated on the arrival of William Watson Brett on June 11 last. Now we understand why he was absent from the Reunion. — Bill Brewster, II, says that Benjamin Barnes Brewster, born September 9, is just as fine a youngster as the other four who call Bill Daddy! And Mrs. Bill is O. K., too. — William A. Bryant, I, (that's Butsey, you know) says, "Without boasting, let me recommend that you take a look at Alden Park Manor in Brookline. Was responsible for nearly the entire structural design, myself, and supervised the balance as well as the construction." (I took a look at the price of the apartments and that was quite enough.) — H. S. Currier, II, writes under remarks on the ballot "Good Hunting." Let's hear more about it; we will pass any story along, either a fish story or a bear story. — Halsey Elwell, II, says, "When I look at my two days old James, I begin to believe there is something in this evolution business." — Mons Gagnon, II, said a month ago that he was going to write me a letter soon. If I survive it, you can all read it next month. — Harold I. Green, II, reports that he has just moved into his new house at 144 South Center Ave., Rockville Center, N. Y. — On August 21, Alfred Katz, XI, wrote that he was leaving for Germany to visit the hosiery markets in the hope of developing novelties for the coming year. He says the importing business is exceedingly active and takes all of his working and spare time. — Ira W. Knight, VI, was married on June 11 to Miss Christina I. Arnold of Providence. We wish them every pleasure in their new home at 21 Dexterda Road, Providence. — C. J. McCarthy, VI, says that the report of his death is exaggerated! Gosh, we didn't even know he had been sick. — S. W. Selfridge, II, from Los Angeles, writes, "Things move along on a pretty even keel out here. Still in the right-of-way game for the Standard Oil Company — a bit remote from Course II instincts but nevertheless mighty interesting. One never lacks variety in this game." — Ben Thomas, VI, leads up to a splendid climax thus: "After a year of traveling for the Economy Electric Devices Company of Chicago, trying to get the electric railways to save power and money (and to make money for us) I returned to St. Louis and last December became associated with C. E. Smith, I, '00, Consulting Engineer in St. Louis. Among other general engineering work we are making for the city of St. Louis a rapid transit survey. I am devoting most of my time to this and find it very interesting. However, the most interesting thing that has happened to me occurred on January 15, 1925, when Miss Alice M. Darst of St. Louis became my wife. It's a great life."

Ralph L. Thomas, Jr., dropped in on Mr. and Mrs. R. L., on March 4, 1925. R. L., Sr., says he can be inaugurated on his birthday. That is a real genuine American observation and expresses the kind of stuff that is carrying this old republic along the way.

Now, then, boys, let's get together and swap yarns about ourselves. You write to me and I will write to the bunch. We are going to have Thirteen's Thirteenth Reunion next year on or about June 13, but don't save all your news for that occasion. You will be making history then, not reciting it. *Pecking* at this typewriter reminds me, as many a typist has writ, "Now is the time for all good men to come to the aid of his — class secretary." Station KHAP signing off at 1:17 A. M., Eastern Standard Time.

HARRY D. PECK, *Secretary*,
99 State Street, Boston, Mass.

'14 Greetings! Here we are already starting another year and before we know it we will meet for our next Five-Year Reunion. Let us keep up the spirit and activity that has been shown since our Ten-Year Reunion and keep Fourteen in the lead as the most active Class in the Alumni Association.

Yes, one by one they fall. We had begun to think that the few remaining bachelors of the Class were hopeless, but when an announcement arrived carrying the glad news that Ross Dickson had joined the benedicts we renewed our hopes for all the rest. Ross claims as an excuse for his delayed action the fact that for the past several years he has been traveling around so much that he has not had time to think of more serious things. The announcement reads as follows:

1914 Continued

"Mr. and Mrs. Milo Nellis announce the marriage of their daughter Marian Luella to Mr. Ross Hewitt Dickson on Friday the eleventh of September, in the City of New York."

Stan Smith also has settled down during the summer. The "Reading (Mass.) Chronicle" contained the following notice of the glad event: "Another June Wedding. Carvel-Smith. Last Saturday evening Miss Ethel, daughter of Mr. and Mrs. E. Carvel, 27 Minnesota Ave. Somerville, and Mr. Stanley A. Smith, 81 Pearl St. same city, were married at the home of the bride's parents, and after a fortnight's motor trip which will extend over the Canadian border will come to Reading to reside in their new bungalow at 186 Lowell St. The bride is a graduate of Wheaton and the groom of M. I. T., '14, architectural engineering. Mr. Smith lived in Reading at 25 Willow St. for a time until he went last year to Somerville for the winter. He built the Reading theatre."

Our old friend Capt. Burnham too is headed in the right direction. Joe Currier forwarded the following clipping taken from the *Army and Navy Register* of last June: "Rear Admiral and Mrs. Charles W. Dyson announce the engagement of their daughter, Miss Mary Eleanor Dyson, to Captain Lucien W. Burnham, U. S. M. C., who is at present on duty in Washington marine headquarters."

Another interesting announcement that arrived during the summer is the following from L. S. Hall who is out in Oakland, Calif.: "Mr. and Mrs. L. Standish Hall announce the arrival of Ruth Josselyn, Sunday, June fourteenth, nineteen hundred twenty-five, weight seven pounds three and one-half ounces."

When we get down to business items we can usually count on a notice in a pinch from I. Paris. Here is the latest: "Herbert B. Moses of the Washington Loan and Trust Building, and I. Richard Paris of the Barrister Building, announce the formation of a partnership under the firm name of Moses & Paris, Patent Lawyers, Washington Loan and Trust Building, 900 F. St. N. W." — Werner Schaurte, who is now of the partnership of Bauer and Schaurte in the manufacturing business at Baden-Baden, Germany, sent the following pleasant greeting with his class due remittance: "It certainly was a pleasure to get your circular, and I am only too sorry that I won't be in the States in June because I really would like to see some of the old Class again."

J. W. Horton, of the Bell Telephone Laboratories of New York, formerly the Engineering Department of the Western Electric Company, is the co-author with H. E. Ives of the same Company and R. D. Parker and A. B. Clark of the American Telephone and Telegraph Company, of an interesting article describing the transmission of pictures over telephone lines which appears in the current issue of the *Bell System Technical Journal*. This service is one of the most recent developments of the Bell Laboratories and has been reduced to commercial practice. This article is the first description of the process to be published. Horton has been with the Bell System Research and Development Laboratories since 1916 and has been closely connected with the development of apparatus for carrier current communication.

There has been no issue of *The Review* during the past two years when your Secretary has not had before him several items regarding Pat Adams. The following has been selected as the most interesting to Fourteeners of the Adams clippings gleaned from the summer papers: "Porter Adams, chairman of the American Legion Aviation Committee, has received his commission from President Coolidge as lieutenant commander in the United States Naval Reserve. Commander Adams was promoted from the rank of ensign as a reward for his services to aviation and to the Navy. His commission dates from May 19, 1925. Entering the secret service of the Navy before the country entered the World War he was sent to Maine to take charge of naval intelligence on that coast. He served subsequently in Boston, at the Chatham Naval Air Station and on the destroyer U. S. S. Lardner and on several submarines. He is an alumnus of Massachusetts Institute of Technology and a collaborator with Donald Douglas, designer of the Army World Cruisers. He had flown on both coasts as early as 1915 and has been interested in commercial aviation since its inception. He was appointed chairman of the Boston Municipal Air Board by Mayor Curley and is at present working for the erection of commercial hangars in Boston." During a motor trip last summer through the New England Mountains your Secretary had the pleasure of stopping at Pat's summer home in Vermont for a most enjoyable two day visit.

Another pleasant visit during the summer was made by your Secretary and wife to Phil Currier's camp at Ballston Lake, N. Y.

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This trip was made at the time of the A. I. E. E. Convention at Saratoga Springs. Although Phil and your Secretary were the only Fourteeners at the Convention, a number of other familiar Technology men were much in evidence.

While in New York from time to time the various familiar faces are seen, Sousa Brooks, Affel, and the rest all seem to be just as much in evidence as ever.

You have all had a long rest from writing news items during the summer. The weather is snappy again and while you are in the mood drop a line to me so that there may be some interesting items in next month's Review.

H. B. RICHMOND, *Secretary*,
100 Gray Street, Arlington, Mass.
G. K. PERLEY, *Assistant Secretary*,
45 Hill Side Terrace, Belmont, Mass.

'15 No notes have been received by The Review Editors from the Secretaries of this Class for inclusion in the November issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review Office. Members of the Class having news or inquiries should address them to Frank P. Scully, Secretary, at 118 First Street, East Cambridge, Mass., or to Howard C. Thomas, Assistant Secretary, 100 Floral Street, Newton Highlands, Mass.

'16 No notes have been received by The Review Editors from the Secretaries of this Class for inclusion in the November issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review Office. Members of the Class having news or inquiries should address them to D. N. Barker, Secretary, 14 Marathon Street, Arlington, Mass.

'17 Notes were received from the Secretary of this Class too late for insertion in this issue of The Review. All Secretaries are invariably kept informed of the schedule of the magazine by notice sent out ten days before copy is due. In addition to this, thirty-six hours of grace are permitted for the late arrival of notes, if the Secretary makes special request. When notes are received after this time it is usually impossible to insert them and still maintain the schedule. Members of the Class having inquiries should address them to Raymond S. Stevens, 30 Charles River Road, Cambridge, Mass.

'18 No notes have been received by The Review Editors from the Secretary of this Class for inclusion in the November issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the Class having news or inquiries should address them to Percy W. Carr, Secretary, at 400 Charles River Rd., Cambridge, Mass.

'19 Well, here we are again! Your Secretary's intentions of getting a letter to you personally during the summer did not materialize and consequently there is very little news material for this first Review. Personally, I had a busy, happy summer and assume that you too have had a good vacation and are now ready for the year's work. Let's get going and

hear how you spent the summer and what your plans are for the coming winter.

If plans can be got under way, we will try for a class dinner in November for those near Boston. More about that anon. In the meantime, you will probably receive yearly bills for dues and a questionnaire which will assist us in revising the class file and bringing it up to date. The important thing to note here is that we most particularly want to hear from you.

We welcome the news of two summer weddings joyfully and send heartiest congratulations to George G. Fleming who was married on June 6 to Miss Mary Converse at Indianapolis. Fleming's address will be 2035 North Meridian Street, Indianapolis, Indiana. And we send them also to Henri de Bonneval whose marriage to Miss Mabel Curran took place September 15 in the Lady Chapel of St. Patrick's Cathedral, New York City. Miss Curran, daughter of the late Dr. Charles J. Curran of North Adams, attended Wellesley and after studying abroad has been the statistician in charge of records of the Visiting Nurse Association of the Henry Street Settlement in New York City.

Report has it that Frank Coyne is engrossed in designing and building houses in Newton and Watertown. We would like to hear about it from him, and I'm sure if he kept track of these newly-married Nineteeners, it would help his business. — Max Untersee is acting as architect's representative in the erection of the Church of Our Lady of Perpetual Help in Brooklyn, N. Y. This keeps him in New York most of the time and his address is 246 West 25th Street. — We were sorry to lose Mr. and Mrs. Everett Doten from our local '19 crowd this summer, but we know they will be welcomed by the fellows in Detroit where they formerly dispensed cheer and hospitality in the way of Boston-baked-beans for those far from home. Doten's new address is 1217 Book Bldg., Detroit, care of Stedman Products Company.

PAUL F. SWASEY, *Secretary*,
Box 1386, Boston, Mass.

'20 Those of us who were lucky enough to get to the Class Reunion last June came away feeling darned proud and glad that we were identified with a Class that contains so many regular fellows. We had such a good time and got such a generous portion of class spirit that I know the result will be large attendance at all future reunions as well as increased coöperation with your new Secretary.

If those of you who weren't there will stop and think a minute I believe that you too will catch a little of that spirit that was aroused so strongly by the personal contact of the Reunion. Write down the name of as many of the fellows as you can remember, or dig up your old *Technique* and run through the Senior Portfolio. Then spend a few moments reminiscing. Doesn't it make you wish you could see all the old '20 bunch again? Of course it does, but that's out of the question until next reunion anyway. The next best thing is to hear from them all and I'm here to help make that possible.

Ken Akers told you in the last Review that I was in the advertising business implying that this ought to make me a good secretary. But it won't! One can't produce good advertising unless he's got some real stuff behind it. And one can't produce good class notes without some real dope. And you've got to supply the dope.

Either '20 men have been avoiding Boston these past few months or else they have been lying low for I seldom see any of you. Most of the gang that used to meet irregularly but frequently during lunch hour are scattered to the four winds. Buck Clark has gone to Pittsfield,

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1920 Continued

Mass., having taken over that territory for The Flintkote Company. Jim Gibson has moved his real estate office from Boston to Newton and seldom comes to town. Ned Murdough has gone to Indianapolis with the local office of the Employers' Liability Assurance Corporation. He was back in Boston a few weeks ago and called on me but I had the bad fortune to be away at the time. And so it goes. We certainly have a restless bunch. It's about time some of them settled down.

I did run into G. K. French on the street not long ago and we had a nice visit. He has been doing some interesting development work along the lines of cost accounting. He expects to be located in Boston but didn't give me his address, promising to keep me informed. I hope he does. I also met Henry Wason who is now with the B. F. Sturtevant Company's Boston office. He told me that Elbridge was doing some very interesting statistical work for the Old Colony Trust Company here in Boston.

As a class we still seem to be pretty backward about getting married. At Reunion one evening I sat with ten fellows at a dinner table and only two of us were married. I'd like to know what percentage of the Class has progressed this far. Surely more than twenty per cent. The past summer has swelled the roll somewhat but there's still room for improvement, it would seem.

Dick Gee was married to Miss Carolyn Broughton of New Bedford on September 5. Mr. and Mrs. Gee will make their home in Fall River. — James G. Moir, Jr., married Miss Ethel Louise Lavers of Medford on June 30 last. — George Des Marais was also married on June 30 to Miss Louise Gietzen. Their home is at 115 Henry St., Brooklyn, New York. — Clarence Syner sets a wonderful example for the delinquents. He journeyed from the wilds of Mexico to Taunton to make Miss Eleanor A. Wilbur his bride on June 20. They have settled down at Parral, Mexico, after a honeymoon trip to the Pacific Coast. — Harold Goodwin was married on June 27 to Miss Martha Louise Dewey of Great Barrington. They will live in Philadelphia. — Another notable June wedding was that of John Clement Barker to Miss Elsie Charlotte Linde of Portland, Maine. Their home address is 95 Motley St., Portland, Maine. Barker is with the John W. Burrowes Company. — Phil Bryne played one of the leading parts in a double wedding in

Dorchester on June 30. His bride, Miss Marie E. Fitzgerald, and her sister, had a double ceremony. Phil is a combustion engineer with the American Gas and Electric Company of New York — Edmund Geddes Wilson was married last spring to Miss Dorothy Balcom of Waban, a graduate of Mt. Holyoke College. — Edwin Rich married Miss Jennie Birmingham Perry of Mount Vernon, N. Y., last June. They are living at 617 South Sixth Ave., Mount Vernon. Rich is an engineer for the New York Telephone Company.

At the present writing returns from the fall crop of weddings have not been received but we hope to have several announcements of this nature in our next notes.

Larry Burnham became the proud father of a daughter, Roberta Louise, on August 13. Larry is living in Belmont now. — Mouse Meissner has been touring Europe for the past several months, spending a large proportion of the time in Paris. He writes that he has been having a wonderful time — as if he needed to tell us that. — Joshua Muss, after spending five years with the Sanitary District of Chicago as assistant engineer on the design of collecting sewers, pumping stations and treatment plants, has resigned to take up similar work with the Township of North Bergen, N. J. He is at present resident engineer on a sewage treatment plant and expects to design additional plants in the near future. — Benjamin West's book "America's Greatest Dam: Muscle Shoals, Ala." has attracted considerable interest and much favorable comment. John Clair Minot of the *Boston Herald* says of the new edition which West revised and brought up to date recently: "The work is the most comprehensive and authoritative study that has been made of this great project." — We hear that Ernest Whitehead has been made superintendent of public buildings of the City of Worcester. He is also associated with his father, a general contractor of that city. Write us about it will you, Whitehead? — George Walmsley has left the Manomet Mill of New Bedford where he was master mechanic to become assistant plant engineer of the Felton Bag and Cotton Mills at Atlanta, Ga.

Before you turn over the page just make a note of my address so that you can drop me a line even if its only a post card. The bunch would like to know how you're faring just as much as you'd like to know about them. As an advertising man I suppose I should put it as

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1920 Continued

follows: "Only 15 minutes a month — that's all the time it takes you to make these class notes the best ever. Be one of the favored 4 out of 5 to win the distinction of a mention in The Review. Such popularity must be deserved. There's no time like the present. Sit down now while it's fresh in your mind and send in that letter. Satisfaction guaranteed or your money refunded."

HAROLD BUGBEE, *Secretary*,
9 Chandler Road, West Medford, Mass.

'21 No notes have been received by The Review Editors from the Secretaries of this Class for inclusion in the November issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review Office. Members of the Class having news or inquiries should address them to Raymond A. St. Laurent, Secretary, at 431 Oliver Street, Whiting, Ind., or to Carole A. Clarke, Assistant Secretary, Northern Electric Company, Ltd., 121 Shearer Street, Montreal, Que.

'22 The way to resumption, in the classic language of Salmon P. Chase, is to resume. Herewith, we resume. (Not, you understand, that we don't hope you had a pleasant summer, and all that. The only thing is, space is costly, and since we have never, in the past fifteen years had anyone answer us No when we asked if he'd enjoyed himself, we are hereinafter proposing to take it for granted. If anyone didn't, he may file a demurrer.)

The opening reports of the Course Secretaries might fill a five-foot shelf if they were carved on stone. Economically printed on sixty-pound paper their bulk is not so impressive. Of the absent brothers, George Holderness wrote in to say that no one had vouchsafed him anything from which a report might be made, and Parker McConnell was suddenly revealed as missing when a letter came back to us unclaimed from Newark. We have since discovered why. It has always been known, of course, that Parker was destined to go up in the world, but we'll all agree that it was pretty tough that he should go up-state at the same time. Yet it is so. The Tidewater Sales Corporation, to whom we frantically wrote for news of the erstwhile Brummel of

Broad Street, informed us that Parker is now assistant supervisor of sales in the Corporation's office at Syracuse, N. Y. Parker had not told of this (nor of anything else) and our divining rod seems to have become demagnetized. Nevertheless, we congratulate him, curse him, and hope that our redirected letter reaches him before he is promoted again. For one thing, we want some news from him of Courses V and X. For another, we are consumed to know how life goes for him in the sticks.

Provisionally, at section closing time, just before these notes were written, we had callers. Illustrious callers. Welcome callers. Callers bringing news of the great outside world from which your Secretary is so effectively cut off. Tom Alder and Don Carpenter they were. We had seen Don at the Reunion in June, but Tom we had not laid eyes on since graduation — not, God knows, that that was his fault. Half a dozen times in the past three years Tom has looked in on us and always we have been somewhere else than at our desk, where we belong. But he did it once too often last Friday, and we were here when he came in. Don followed him a few minutes later. The result was that not only did the Secretary spend a very pleasant twenty minutes but he got some news of silent classmates.

Take the case of Cliff Gayley, for example. Cliff is now well on the way toward bowling Charles M. Schwab off his pedestal by having acquired the triune office of Treasurer, Production Manager and Director of the Chrome Steel Works, in Carteret, N. Y., with which concern Les Bridaham is also associated. "But," said Don, "the greatest feather in Cliff's cap is that for some two months he held the job of Plant Superintendent." It seems to be Don's contention that anybody can be a Treasurer, but that to be a Plant Superintendent, you have to have the goods. Without having been either, we nevertheless incline to think Don is right. Cliff has shown his stuff, and demonstrated into the bargain the extraordinary potency of Chemical Engineering as training for a career. It remains a perilous course, however. It either makes you into a record breaker, or else it back-fires and turns you into a Class Secretary. The Youth of the Land should pause before the decision.

Then there's Ernie May, who is now in France, studying French. This should not be construed as a slur at the Department of Modern Languages. It simply means that Ernie is in process of being French Liaison Officer for the du Pont interests, presumably with headquarters in Paris. . . . Is any other great corporation interested in the services of a young man anxious to master the French idiom? Address Technology Review.

The rest of our gleanings from Tom and Don are briefs. We know, for example, that Dunc Lindsley is married (that's slang for Joining the Benedicts' Club) but we lack other details. We know that Ham Williams went to Europe last spring, but that's all. If either of these lads can find it in their hearts and schedules to amplify these rather feeble waves, we'll recharge the B-battery immediately. . . . And those who are interested in getting their vital statistics slightly more documented are asked to note that there transpired last spring the engagement of Miss Betty Platt to none other than Malcolm Stuart McGhie, to whom we proffer our sincerest congratulations.

As for Don and Tom themselves, they are tough lads to interview on their own Personal Mentions. Tom is just effecting a change of base, and promises us further details in the future. Don, as most of us know, is in charge of the destinies of the B. G. Carpenter Company, in Wilkes-Barre, which is naturally flourishing in the field of consulting and contracting engineering. Heinie Horn, by the way, has transferred his allegiance to a concern engaged in the publication of an equipment catalog similar to Sweet's. We plead for further details.



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1922 Continued

In looking over the folder of news acquired from other sources, we note first of all a Carte Postale of recent receipt from Charlie Roll. Listen: "Thought I'd let you know where I am, for a change. Have been in bed for two weeks with a fever I got in Fez, Northern Africa. Was at the French front in Morocco for ten days, and it is very bad down there. They were just starting their new offensive when I left. No one knows what a bath means . . ." Despite the ambiguity of the last sentence we were glad to hear from Charlie, and only hope that the fever has by now abated. The last place we saw him was in the Lenox grill, so that a post card from Marseille was not precisely what we had expected.

From Osmium Selenium True, he of the Green Economizer, there came the other day a pleasant phone call. He told us of his recent return from Buffalo, where he had seen, among others, Joe Forrester and Ray Mann. It was from Os that we learned for the first time of the death, under the most tragic circumstances, of Roger Hunneman, who took his S.M. in the Chemical Engineering Practice School with our Class. Roger was returning by auto from Chicago to Whiting, Ind., (where he was a research chemist with the Standard Oil Company) with R. E. Wilson. Their car collided with a truck, or vice-versa, and although R. E. escaped unhurt, Roger was thrown through the windshield and rendered unconscious. The desperateness of his injury was not, however, realized until later. He never regained consciousness, and died in the same hospital where a child had just been born to his wife. It is impossible to imagine a situation of greater tragedy, or one in which even the sincerest sympathy will seem anything but inadequately spoken.

Although the date on it is not so modern as we would like, (no one's fault but our own) we have before us a letter from Hugh Shirey, which contains a wealth of quotable material. It was drawn forth by a paragraph of ours on an operation Hugh had undergone. We did not know how serious it might have been, but Hugh described it as minor, and for the completer rectification of a finger broken when a bench in the Track House upset on him years ago. He goes on: "On January 1 I left the National Cash Register to go with the Curtice Brothers' Company. Our factory wasn't busy then so I did some sales work in Buffalo for a few weeks. There I saw Al Bowers, who is with Worthington Pump; Bob Barker, '21, in charge of Radio Department, Neal,

Clark and Neal; Al Browning and Warren Ferguson, both with the Robertson-Cataract Electric Company; Harry Rockafeller, of the Linde Air Products Corporation, and Jack Kirkpatrick, '23, with the Bureau of Underwriters. Since then I have been doing anything there is to be done, from factory basement to office, and learning all the business my head will absorb. I shall eventually land in production. This summer I will be in one or two of our outside factories near here, during canning season. If you are particular what you eat, ask for the Blue Label Line — ketchup to chicken, with vegetables and fruits in between.

"Matt Taylor is still with Eastman, but Bill Edmunds has left and has gone some place in Oklahoma. . . . I am sorry to miss the Reunion, but peas must be canned when ripe."

R. W. Haskell, one of the distinguished group of Thespians who made the 1922 Class Day memorable, dropped in to see us and exchange some green room gossip on September 21. He had been on construction work with the Southern Power Company, and had been during the past winter in every southern state but Tennessee. We applaud his discrimination.

When we came back from vacation we found the following letter addressed, under date of August 16, to The Technology Review: "Kindly deliver this letter and the enclosed clipping from the Boston Transcript of August 15 to the Secretary of the Class of 1922." The signature was of E. Allan Reinhardt. We turned the clipping over to ourself in accord with instructions and discovered that it read as follows: "At the home of Mrs. Walter H. Weston, her daughter, Miss Madeleine Weston, will be married this evening to Evert Allan Reinhardt of Bronxville, N. Y. . . . The bridal couple will go on a wedding tour through the Canadian Rockies to the Pacific Coast, and will return by way of the Yellowstone and Glacier National Parks to New York where they will make their home." We extend our most paternal congratulations. If Reinhardt is ever in Boston we hope he'll drop in and swap notes on the Rockies and Glacier Park, for it was just such a trip as we made a summer ago, with the considerable difference that we were no part of a bridal couple. Drunk or sober it was a good trip, and we suppose the same holds true for married or single.

From Providence, R. I.: "Mr. and Mrs. Howard Willis Preston announce the marriage of their daughter Ruth Howard to Mr. Walter

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1922 Continued

Mills Saunders, Jr., on Saturday 5." We submit the sincerest congratulations of the Class. Walt and Mrs. Walt will be at home after November 1 at 140 Doyle Ave., in Providence.

We have hit our two thousand word mark, and must arbitrarily hold other items over until next month. We find no dearth of news ourself and rather wonder why the Course Secretaries keep the silence so comparatively undented. We should rather like to run a little news competition this year, and see whether it will be the central office or the branch agencies that will finish up next July with the largest volume of news and slander. The prize should be something substantial, like, say, an automatic address-finder and note-writer. Anyone on our side is invited to drop us a line at the address below. Mail early and avoid the rush.

ERIC F. HODGINS, *General Secretary*,
Room 3-205, M.I.T., Cambridge, Mass.

COURSE I

Oscar Horovitz joined the ranks of the benedicts-to-be. About three months ago he sent a card coupling his name with that of Miss Mary Freedman, of Roxbury. — Eddie Keane has come back to the engineering fold, where he always belonged, and is now working with yours truly in Brookline. — Jim Fisher, after a long time spent in South America on important survey work, is working out this way too. He is with H. F. Bryant and Sons, Engineers.

I suppose it will be no thrill to Joe Ward to have his name mentioned in this literary gem, but have you noticed his name at the head of the feature articles in the *Boston Globe* on such happenings as the Pickwick Club disaster and the explosion on the Mackinac? He also gets mixed up once in a while in such things as anti-Klan riots by way of diversion.

J. F. HENNESSY, *Secretary*,
4 Cypress St., Brookline, Mass.

COURSE XV

A letter from Lee Carroll, written to Ed Ash: "Had you written me for facts as to my whereabouts less than two months ago I might have told you a vastly different story than the one you see portrayed by this letter head [Newman Brothers & Worms — Stock, Cotton, Coffee, Sugar Brokers, 25 Broad Street, New York] for then I was superintendent of a Coal Mine situated in a forlorn section of the Cumberland

Mountains in Kentucky, with tales of moonshine, bootlegging, cool shooting and all that sort of thing. But the most depressed condition in the soft coal industry in twenty years decided us that there were other lines more profitable and forced us into bankruptcy. An extremely interesting time to say the least, but I was glad of the chance to return to civilization again and once more resume my Wall Street activities, in which I spent my second year out of college, and to which, now, I have dedicated the balance of my earthly existence — barring unforeseen contingencies. So the present finds me as Assistant Manager of the Branch Office of the above firm at 93 Worth Street, New York City, to remain indefinitely. I regret keenly that my fortunes have not brought me back to Boston since '22 but I hope to be able to take a run up there some time this summer."

Word was received from Mr. and Mrs. Jesse Jones of Rockland, Maine, of the arrival on August 4 of Jesse Jones III.

The other evening we had the pleasure of meeting Ed Fales at Durgin Park's. Ed is apparently the latest of those who have taken on a general manager. We talked with Ed and Mrs. Ed over the famous steaming baked potatoes of Durgin's and wish to take this opportunity to compliment the big boy on his good judgment or good luck or both. Ed is with Rust Craft Publishers, 1000 Washington St., Boston.

One way to introduce a little regularity and system into these notes and make it possible for an annual cycle of news from all hands and the ship's cook is to make birthdays not only "red letter days" but "letter to the Secretary days." On or before the annual event (we cannot yet afford to send reporters to interview our to-be-famous) just sit down and write to all those you know and those you hope to know, address the epistle, after you have told the whole story, to the Secretary and then Eric does all the work. What could be simpler?

HARRIS B. MCINTYRE, *Secretary*,
Engineers' Club, Boston, Mass.

'23 Although we can't shake hands and sock each other on the back as we used to do at the beginning of the fall terms at the Stute, still we can get together again for a little confab over things of mutual interest, through the columns of *The Review*. And, by the way, if you have forgotten to send the Alumni Association three berries don't forget any longer or the money will be all eaten up by the notices that are sent out to collect it.

We have the All-Technology Reunion behind us now so that we can begin to look ahead to our own first Five-Year Reunion. In the meantime, however, let's not get lost. Keep in touch with the gang by reading *The Review* and be sure to drop us a line from time to time. We hope you all have had a pleasant summer and have your winter's coal in.

ROBERT E. HENDRIE, *General Secretary*,
12 Newton Street, Cambridge, Mass.

COURSE I

In the July Review Jim Robbins and Ralph Dressel, who have so efficiently and effectively handled the notes for Course I since graduation, swore vehemently that they would get out of telephonic range of the Gensec. Well, they have both succeeded marvelously. Sailor started going West and the Pacific Ocean is all that stopped him from circling the globe and inadvertently hitting Cambridge again from the other side. Jim started South and when last heard from was headed for the plateaus of Chili. So, until these birds fly home to roost please send all Course I communications direct to the Gensec. Here's the story about Jim: After cleaning up at the Stute he decided to go to work, if possible. Having sampled government jobs and finding them juicy, he applied to Washington for a job as chief of party with the "Special Commission on Boundries" which is to survey the boundary between Peru and Chili, for the purpose of settling once and for all the question of ownership of large nitrate deposits in the plateau between the two countries. Jim sailed on August 6 and expected to be gone about six months. They say that even mosquitos can't live in the plateaus, but Jim expects to survive. We hope he does and that he avoids the lure of the Chilean beauties.

We haven't heard a word from Sailor Dressel since he left for San Francisco but we assume that he arrived duly and is now selling all kinds of insurance for the Federal Mutual Insurance Company.

The Gensec received quite a surprise one Sunday afternoon a short time ago. The door-bell rang and investigation proved that it was rung by none other than the illustrious Bert McKitterick who was supposed to be miles away in Milwaukee. Mac came East the first of the summer to help out with his father's brush and textile supplies

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1928 Continued

business in Lowell. He is trying his hand (or tongue) as a salesman, and knowing so well his linguistic ability we hope he doesn't put the business on the rocks. Mac was with the Worden-Allen Company in Milwaukee, detailing and checking for about a year, before coming home. He is still single.

We received an interesting letter from McQuiston the other day. He is now with the Barrett Company doing valuation and appraisal work. He is at present in Halifax, Nova Scotia, on a job. The work covers a complete survey and inspection of land, buildings, and mechanical equipment. Mac says, "Every time I run up against boilers, I wish I had paid more attention to Eddie Miller." When he gets through in Canada Mac expects to go through the South and middle West.

I bumped into Carl Dipple the other day. He was looking fine, fat as ever and prosperous. He is still making window shades in Newark, and said he had just met Charlie Wenz. — Si Rice has returned from Chicago where he spent a few months with the Pennsylvania Railroad. Since coming back he worked a while in the State Bridge Department but is now with the J. R. Worcester Company in Boston.

Years ago a Spaniard by the name of something or other tried to find the fountain of youth and he landed up in Florida. We don't know whether Jeff Hails and Herb Leisk are on the same mission but the latest news flashes, direct from the *Boston American*, say that these two are on the way to this land of promise. We have not been able to learn just what they intend to do when they get there but we earnestly hope that they are not going to follow the example of Eric Barnes and Neck Gilman and invade the University of Florida. Whatever their intentions, we will expect an explosion or earthquake in that vicinity soon.

Jerry Putnam is still with the Kalman Steel Company and reports that nothing of unusual interest has happened to him in the last few months. He bumped into Arne Ronka the other day and says he is getting fat. Ronka is working for Stone and Webster in Pittsburgh. — Nick Cohen was seen a short time ago climbing one of the towers of Queensboro bridge. He was having a tough time of it because he was balancing a transit on one shoulder. When arrested he said he didn't steal the transit but was working as a topographical engineer for the City of New York. He was trying to get a shot on a point but a building was in the way so he climbed the tower. After checking up his

story the police let him go. — Issie Robinson is rather silent but is also working in New York as a structural steel draftsman for the Transit Commission. — When last heard from, which was some time ago, Clayton Harvey was working for the State of Massachusetts Highway Department. Drop us a line, Clay, and tell us whether the rumors are true that you are married. — From all indications Sukham is now quite an engineer in his home country. He is in the Sanitary Department of Bangkok, Siam, and will probably be rebuilding the city sewerage system soon. — Seels is building bridges out in Chicago. We hope we don't have to cross any of them although he has a title of Junior Engineer with the Chicago Bridge and Iron Works.

That is about all the dope that has come in during the summer. We will have another batch of notes just as soon as you fellows loosen up a bit and send in a little stuff.

ROBERT E. HENDRIE, *Acting Secretary*,
12 Newton Street, Cambridge, Mass.

COURSE II

From the number of letters received not very much has happened during the summer. We received a copy of the *Cleveland Press* of June 1, just too late for the July Review. On the sporting page of the paper was a picture that would take a prize in any beauty show. It was one of Hubert Williams attired, not over modestly, in his B. V D's, sitting behind the wheel of a highly garnished, antiquated quadruped of the Ford specie. Under the picture it said "Hubert L. Williams, one of the most popular racers in the Mercedes what price glory classic." Here is the write-up that went with the picture. "Fifty thousand spectators of the scrap iron scramble store up enough laughs for a year."

The story goes on: "Williams in his spider-like flivver threatened for three laps to climb right up on Glory's second-story fenced-in pasture, but a piece of chewing gum or some other important doodab gave way and Number 88 limped into the pit. Williams borrowed a pair of tires and twiddled with one hand while he drove with the other, but his effort produced nothing but perspiration and hilarity on the stands. When not racing, Williams works for the White Motor Company."

On June 19, at the Charles River Country Club, Herrick Tappen



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1923 Continued

was married to Miss Eugenie Stafford Brown of Newton. Congratulations, Herrick! Schuyler Hazard was best man and Warren Ferguson and Abbot Johnson were ushers. — George Gibb is also a benedict now. In August he married Miss Esther A. Jackson of Milton. More congratulations.

Johnny Gegan has been working for the New England Tel. and Tel. for about a year. He has just been transferred from Boston, where he was working on the "Popular" phone rate increase, to Portland, Maine. — Fred Mann is still in the traffic department of the same company and is now helping to instruct the traffic forces in the art of machine switching operation.

Let's hear from you fellows. We need some dope.

HAROLD B. GREY, *Secretary*,
Vitrous Enameling Co., Station D., Cleveland, Ohio.

COURSE III

A letter from John Flaherty says, "Until last October I was chief of party, and road construction foreman for the Arizona State Highway Commission. I have had a peek into every corner of this newest state and a few other places with it. On my way home I stopped at El Paso to see Norman Weiss, who was then managing flotation research work. The two of us put in four or five days of strenuous work in Juarez and then I departed broke but triumphant. From New Orleans I came to New York and nearly froze in the process. However, the boat trip was wonderful and novel.

"I am now working for a general contractor here, doing estimating, steel and concrete design, and supervision. With any sort of luck I shall be in Florida this winter in the construction business." John's address is now 51 Wainwright St., Boston.

Sully is also in Boston, but we'll let him tell it: "I'm punching test tubes and typewriters here in Boston. Expect to get an Sc.D. next June in metallurgy from the Stute. My prosaic life has been interrupted to the extent of writing a book on special slide rules. The manuscript is finished, but the book is not yet published. An occasional story for the Associated Press, *Boston Traveler*, and *Christian Science Monitor*, keep me chasing the Professors around the Stute.

The above named firm [Ropes, Gray, Boyden, and Perkins] keeps me busy in Boston and Montreal. Although it is a law concern, I have occasion to act as technical advisor, in which capacity I get quite a kick out of life."

Harry Bruner has left the Penoles Company and is now an oil geologist for the Cortez Aguada Petroleum Corporation, Tampico. He has made a very good connection and is apparently quite satisfied. — Eddie Heap is still located in Atlantic, Mass., in his father's Varnish Factory.

Probably the nearest of us to the Institute is Phil Pearson, who is now with Arthur D. Little doing metallurgical sales work throughout New England. Phil says, "You may be interested to hear that Miss Dorothea Nock, Simmons, '23, and I announced our engagement last spring. Undoubtedly, some of the boys will remember her at some of the undergraduate dances. The date for the final step has not been set as yet." Congratulations, Phil.

Matt Taylor is still with the Eastman Kodak Company in Rochester, N. Y., where he evidently has been doing everything but mining. Starting in on wage system study, he is now a chemical engineer in the Nitrocellulose Division of the chemical plant. He writes, "I manage to keep so darn busy that I haven't had time to have a vacation yet, and don't expect to get one until late in the fall."

Yours truly is still peddling compressed air machinery for the Sullivan Machinery Company at the Los Angeles office. The factory hasn't spent much overtime on the orders I've been turning in so far, but still I have no cause for complaint. I find it interesting work and the more I get into it, the better I like it.

BENJAMIN P. LANE, *Secretary*,
412 East Third Street, Los Angeles, Calif.

COURSE VI

The Course Secretary wandered off to Connellsville, Pa., for the summer, testing electrically-driven ventilating fans, and perhaps it is his fault there isn't more news for this issue. He promises to keep closer tabs on the boys and hopes they'll volunteer with the news sheets.

Robert B. George, who received his Master's Degree with us in 1923, has resigned as Professor of Electrical Engineering at the Oklahoma Agricultural and Mechanical College, Stillwater, Okla., and is now electrical engineer on technical calculations with the Westinghouse Electric and Manufacturing Company, at Sharon, Pa.

M. K. Chandler sent in a letter a long time ago, but too late for the final issue of last year. We know that Myron was engaged at that time and wonder what has happened to him since. It's awful not to know when to send congrats. In regard to hard work, M. K. is still in the machine switching engineering department of the New England Tel. & Tel. Company. Ray Willis is with the same company. — A. H. Kidder, VI-A, design engineer with the Philadelphia Electric Company, has become engaged, and received our congratulations. — Jim Coleman, who was also with the P. E. Company, is working on an inductive interference problem for the N. E. L. A. at the Northern States Power Company establishment in Indianapolis. — Ben Drisko plans to leave the local entanglements of the Bell system in favor of the N. E. Tel. and Tel. Company.

A. J. PYLE, *Secretary*,
Moore School of Electrical Engineering, Philadelphia, Pa.

COURSE VI-A

The other day Bob Hendrie came up to see my boss and on the way out stopped and asked me how I'd like to take care of the job of writing up a few VI-A notes for The Review. To which I answered that I'd be delighted — so here I am.

We've been graduated just a bit over a year and hardly a note from the Course has appeared in The Review. So I'm going to start way back and, though some of the VI-A men may be familiar with most of the stuff in this from reading it in the *VI-A News*, it will be news to our friends in the other courses.

First for the married ones. Jerry Carper didn't hesitate long and married Miss Beatrice Smyth of Newtonville on the day after graduation. They are now living at 54 Woodstock Road, Allston, and a third member of the family has arrived in the form of Miss Ann Carper, born around about Easter time. Jerry is with the General Electric in their Boston office. Hazeltine wasn't far behind and sometime in the July after graduation married Miss Helen Snow of Arlington. He then journeyed to Texas over the road accompanied by considerable news-



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1923 Continued

paper publicity. After finishing his cadet period with the Air Service, Hazel migrated to Colorado where he is now engaged in the development of a reciprocating electric motor. Rumor has said that he too is a proud father—but whether 'tis boy or girl or twins I don't dare state for fear of libel.

A long jump and then on September 16 of this very year, Freddy Travers and Miss Ruth Manter of Everett were united in marriage. We all remember the present Mrs. Travers as Professor Bush's able and smiling secretary. They will make their home at 18 Summer Street, Everett. Freddy is with the New England Tel. and Tel. in the Toll Circuit Department at 40 Broad Street.

And so much for the married ones. Rumors of engagements are numerous but none have been officially announced so until such time we shall be silent in that regard.

Hughie Spencer I see quite often. After spending a year in Schenectady working out numerous transmission line problems, he heard the call of Boston and now is associated with Jackson and Moreland, located in the Park Square Building. There he works days and nights trying hard to make transients behave and systems stay tied together. Hughie's address is 251 Upland Road, Cambridge.—Wally Trumper is still in town. He's been with Stone and Webster since last December and is expecting transfer to one of their operating companies at any moment now. Mail for Wally reaches him at the Boston "Y".—Miles Pennybacker is another of the faithful still around Boston. After his trip with Dag Norwood last summer he hooked up with the G. E. Company in New York for a while and then went with the Spencer Thermostat Company in Cambridge. He had a mighty interesting job there, doing everything from selling to working up special developments. Dag, I understand, followed Horace Greeley's famous maxim and is now with the Cities Service Company out in Denver, Colorado.

I saw Zangwill at the Jamboree Dinner. If anyone of the Class wants to buy a Chevrolet, he'll be glad to be the salesman. Rex, I believe, is with the G. E. Company in Lynn. Bob Shaw also is out there, but they say he is living at the Gralyn, Charlesgate West, Boston.

Charlie Koch is holding down the fort in Schenectady together with Cecil Greene. Charlie's motto is "Bigger and better induction motors, one in every home." Reports say that he has the feminine hearts of Schenectady all aflutter. His mail reaches him at 419 Rugby Road, Schenectady. Greene is with the Central Stations Department, I believe.

Charlie Reeves and P. B. Alger are also numbered among the gang in Boston. Both are working for the Edison Electric, Charlie being in charge of the cable tests and P. B. on construction inspection. Both work many hours a week and are virtual millionaires with all the overtime that they drag down. The last time I saw Charlie was on a Saturday noon and he was just then going to work on a job which he expected to finish Monday morning. He and Charlie Burke were holding up the Old Corner Book Store at the time, discussing the general topic of radio. Charlie Burke is our radio expert, being connected with the General Radio Company over in Cambridge.

I was in New York in the Spring and had time to drop in on Bob Henderson down there. I discovered him in the Walker Building of the New York Telephone Company and surrounded by the darndest mess of wires you ever saw. He took me around to see Rod Goetchius, VI, who was working at the time on the transmission of pictures. Rod is getting to be quite an expert on carrier telephone systems. He's with the Long Lines Department of the American Tel. & Tel. Company. I didn't have much time left that day, but called up P. C. Smith and Bill Appleton. P. C. was at the time located in the Machine Switching School of the New York Telephone Company. Bill is with the United Light and Power Company. I believe that all three of the boys park their shoes at night at the Brooklyn Central Y. M. C. A.

As for myself, I've been with the New England Tel. and Tel. ever since graduation and most of the time been working on various aspects of the rate cases which the Company is pushing in the different states in which it operates. I'd be glad to see any of the boys that may come to town at 213 Congress Street, seventh floor. Or if you want the thrill of putting your nickel in the slot and having the operator hand it back call me up on Congress 9900, Branch 715.

As I've contracted with Bob Hendrie to put some VI-A items in The Review every other month, I must have a few of the important events in your lives. So anyone who knows of such things happening to VI-A men would help me out a lot by dropping me a line. My mail address is 1008 Beacon Street, Brookline, Mass.

J. H. THOMPSON, *Secretary*,
213 Congress St. Boston, Mass.

DAYLIGHT ILLUMINATION.

The angle of refraction being equal to the angle of incident, it is a simple matter to determine the correct angles to use in manufacturing glass which will give good illumination. But for proper industrial plant illumination, there is more to be considered than mere deflection of light. The direct beam of light must be eliminated in order to prevent sun glare, which is objectionable on account of its causing heavy shadows and strong contrasts which decrease the efficiency of employees and necessitate the use of shades which in turn reduce the light to such an extent that daylight illumination any distance from the light source is not sufficient. Therefore, in order to produce a glass which when used in the windows of industrial plants will produce as near to ideal illumination as possible, we must first eliminate the direct rays of the sun by deflecting the light to the ceiling and side walls which re-deflect it back to a distance 25 to 50 feet from the window throughout the entire working area. To accomplish this we have scientifically designed a type of glass which is named "Factrolite."

Factrolite consists of 30 ribs to the inch, running at right angles, forming 900 pyramidal prisms or 3,600 light deflecting surfaces which completely disintegrate the direct beam of light from the sun. Furthermore, the depressions in the surface of Factrolite are so slight that the accumulation of dirt and dust is minimized and can be perfectly cleaned with an ordinary dry scrubbing brush. Incidentally, the cleaning of windows is most important for keeping up production and increasing the efficiency of any industrial plant and should be given more consideration in plant management.

If you are interested in the distribution of light through Factrolite, we will send you a copy of Laboratory Report—"Factrolited."

MISSISSIPPI WIRE GLASS CO.,

220 Fifth Avenue,

St. Louis.

New York.

Chicago.

1925 Continued

COURSE VII

It seems as though the high spot in VII-'23 happenings during the summer was the wedding of Miss Louise Randall Smith of Norfolk, Va., to Milton E. Parker. This took place on July 17 at Norfolk. Several Course VII men were present, including Smoke Fuller, Gerry Fitzgerald, Charlie Blake and myself. Mr. and Mrs. Parker are now residing in Princeton, N. J., while Milt continues his work with the Walker Gordon Laboratories at Plainsboro, N. J.

Smoke Fuller is still with the Montclair, N. J., Board of Health and apparently the climate is agreeing with him. He may be seen almost any day surrounded by a bevy of beautiful girls at the Elms, 271 Claremont Ave., Montclair. He probably will not thank me for this as some one may come around and interrupt him or try to steal his stuff. — I have heard that Tom Duffield is back in the States but I have not succeeded in locating him or getting any information on his activities. — Bernie Proctor is back again at the Stute after two years at Evans Memorial. During the summer Bernie has been making a survey of summer resorts for the state of New Hampshire. — Phil Riley, at the last report, was planning to be back at the Institute again this fall after a year's absence, during which time he was with the Connecticut State Department of Health. — Nothing has been heard from Swett for about a year.

Concerning myself there is nothing to say except that I still hang the same hat in the same place, namely the address occurring below.

EARLE A. GRISWOLD, *Secretary*,
Apartment 18, 317 William St., East Orange, N. J.



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Heater Cord	Moving Picture Machine Cable
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Packinghouse Cord	Hard Service Portable Cable
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Flameproof Wires and Cables	Switchboard Cable
Solid and Stranded Conductor	Canvaste Cord
Lamp Cords and Reinforced Cords	Stage Cable
Automobile Ignition, Lighting and Starting Cables	

Quality of product is our first consideration

**BOSTON INSULATED WIRE
AND CABLE COMPANY**

Boston, Massachusetts

COURSE IX

A letter was received from Ed Healy the middle of the summer. Ed is still with the Turner Construction Company and is moving around from job to job. He says, "I have been with Turner practically since we got out and it has been one move after another — the road always. Just now we are giving a Buffalo public school the final strokes before withdrawing. A few laborers and carpenters and I make up the force but — better days are coming."

ROBERT E. HENDRIE, *Secretary*,
12 Newton St., Cambridge, Mass.

COURSE XV

As the years wax and grow fat, many events transpire in this potent period of our lives that are worthy of official record. There were some return postals sent out to as many of the boys as I could get time to write and the response has been fine. There were some cards sent out too late to get in this issue, but, much to my joy, there will be something to tell about next time.

Mrs. Henry D. Shedd of Lake Ave., Rochester, announces the engagement of her daughter, Mary Emily, to Mr. Edmund H. Miller, also of this city. Aha! — Fritz Clement, working for the American Radiator Company writes, "still a first class plumber, Ed. Am hoping to be married in November."

Joe Sherer has gone to China for four years with the General American Tank Car Company. — Chuck Gersinger reports considerable progress with a daughter now ten weeks old. He is one who really got something very useful out of Tech. He installed the planning department in the Ohio Injector Company which was developed in his thesis. He sends best wishes to all of the boys.

Ben Chapin has left Stone and Webster to become a real estate manipulator for E. T. Harrington Company of Boston. He is following Prof. Schell's instructions to "Get near the money, boys."

Gerry Fitzgerald is with U. S. Bureau of Fisheries at Washington, as a fisheries engineer and general business scientist. He was six months in the South Atlantic states and wrote a survey of this work to be printed in 1926. He expects to return to Tech for a Ph. D. in Chemistry this fall.

And to close, here is a touching and significant sequence, pictures and conclusions to be formed by reader: Johnnie Ballard, working still with the Ballard Martin Electric Inc. Company at Fort Worth, Texas, writes, "Single and no prospects." — Carl Dipple, Secretary-Treasurer, Dipple Shade Company of Newark, N. J., says — "Single and intentions of remaining so — maybe." — And Walt Metcalf was married on Sept. 19. He is acting engineer Shipley Construction and Supply Company at Brooklyn. He doesn't commit himself but he lives now at 8625 4th Ave., Brooklyn, N. Y. Congratulations anyhow, Walt. Mrs. Metcalf is just as specific now, anyway.

EDMUND H. MILLER, *Secretary*,
Leyll and Dewey Sts., Rochester, N. Y.

'24 Back again! And it seems good. After a few months' rest including two weeks' vacation, one always gains new vigor with which to tackle the next year's work. I hope you all have it and feel like making twice as good a showing for yourselves and 1924 as you did last year.

The extent and diversity of news this month has given our second year as Alumni a good start in the pages of The Review. But because we have made a good start, don't imagine that it will keep us going for the whole year. It won't. It only takes care of this month and the Secretaries have got to work just as hard and receive just as many letters from you next month in order to equal this month's record. After the Course Secretaries have each made such good appeals for news in their contributions I always hesitate to add any more to what they say for fear of spoiling the effect of their efforts. But please remember it seems ungrateful on your part not to write to them when they go to such ends to supply you with news of your classmates.



GENERAL RADIO COMPANY

Manufacturers of Radio and Electrical Laboratory Apparatus

BOOKLET H
SENT ON REQUEST

111

CAMBRIDGE, MASSACHUSETTS

1924 Continued

Just to give you, or some of you, an idea of what is news, I'll quote the spaces left vacant in most cases upon my class cards. Reading from North to South they are: Name in full, Degrees, Address, Occupation, Home or Permanent Address, Married, when Married, to whom, Children, Name, Born. If you can fill that questionnaire out on a piece of blank paper and send it in, you will be repaying a part of your obligation.

The news you have been waiting four months for follows.

HAROLD G. DONOVAN, *General Secretary*,
80 Farmington Ave., Hartford, Conn.

COURSE I

In my last appearance in the columns of this estimable magazine I promised to start my "dress suit society column" with a bang in this first issue of the new series if I got some support from the contributors' club. That support has been almost entirely lacking throughout the vacation days so the lines of this act will be very meagre indeed.

I did get a communication from an enraged member of the Class, one Nathan Ginsburg. You may remember that in a previous issue I made the bold statement that he was holding a rod for the Boston El. Ginsy takes offense at this accusation and writes as follows: "At present, you may note that I am located in Middleboro, which for your information is about thirty-five miles from Boston and does not come under the jurisdiction of the Boston El in any way, shape, or manner. Perhaps, by this time, you may doubt the accuracy of your statement but I will not keep you in suspense any longer. One thing I suspected, and since found to be true, is that work outdoors is a great deal better than being cooped up in a Boston office, for when I wasn't a rodman, which was most of the time, I was penned indoors and found it none too pleasant during the summer. And so I thought I'd come to Middleboro. By this time I'm a wee bit ahead of my story and so must get back to Boston. I took the civil service exams for transitman, succeeded in passing them and so landed a position with the Massachusetts State Highway Commission. If you desire to correct your statement in The Review I might suggest your stating it thus: 'Ginsburg was handling a rod for the Boston El—he is now handling a gun for the Massachusetts State Highway.'" Ginsy goes on to suggest that if I want to get results from my appeals for contributions from my classmates, all I need to do is accuse them of occupying a more menial position than they actually hold. It worked in his case, at any rate.

I have been hearing from Bill Correale from time to time. He left the Electric Bond and Share Company last spring and has since been employed in the field engineering staff of Sanderson and Porter, who are building a hydro-development in Pennsylvania. — Fletch is still with a field survey party for the Georgia Railway Light and Power Company and hopes to be transferred to construction work soon. Don Moore has been transferred from the S. & W. drafting room to their hydro-electric job at Columbus, Ga., the same place where Ed Jagger is holding forth. Judging from his application for membership in the A. S. C. E., Tapley has left the Alabama Power Company and is now with the Dixie Construction Company at Dadeville, Ala.

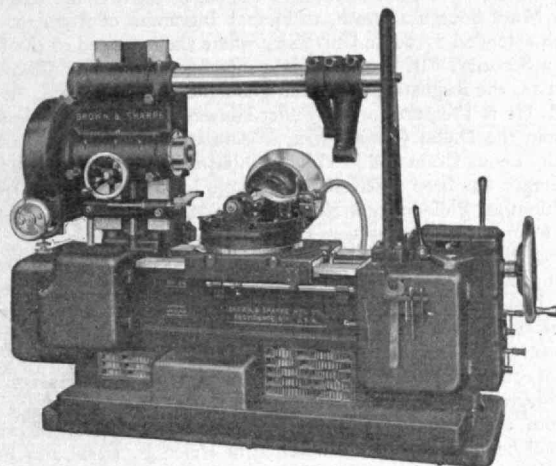
As for myself, I am once more at the hub round which the world revolves. As the many hydro plants which the Minnesota Power and Light Company were going to build didn't materialize, I disregarded Horace Greeley's advice and came East, entering the employ of Charles T. Main, Engineer, on June 15. I'm doing hydro investigation and design and feel well satisfied with my change. Perhaps my satisfaction will be explained in part by the following clipping from the Washington (D. C.) *Star*: "Mr. and Mrs. Nathan C. Grover announce the engagement of their daughter, Mary Hamilton, to Mr. John Douglass Fitch of Montclair, N. J., and Boston. Miss Grover is a member of the present senior class at Wellesley, and Mr. Fitch was graduated from the Massachusetts Institute of Technology in 1924."

I know that a good many of you, like myself, have recently changed jobs. How about writing me and telling me what you are doing?

J. D. FITCH, *Secretary*,
c/o Charles T. Main, Engineer,
200 Devonshire St., Boston, Mass.

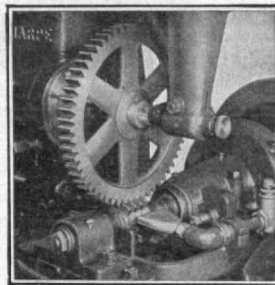
COURSE II

From the *Boston Transcript*: "Mr. and Mrs. Charles D. Redmond, of Arlington, announce the engagement of their daughter, Miss Redmond, to Robert Walker Barker of Cynwyd, Pa. Miss Redmond attended school at Tarrytown, N. Y., and has studied music in Boston. Mr. Barker . . . has been a student at the Seibel Institute in Chicago, Ill."



The Differential Eliminates Unnecessary Calculation

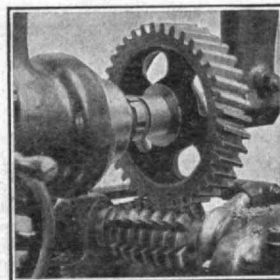
A WINNING feature of the Brown & Sharpe No. 44 Spur and Spiral Gear Hobbing Machine is the differential. With the introduction of this device the selection of change gears, previously a difficult mathematical problem, was greatly simplified. And, the differential is but one of the modern construction features of the No. 44 Machine.



Hobbing a Spur Gear

The Brown & Sharpe No. 34 Spur and No. 44 Spur and Spiral Gear Hobbing Machines are representative of the highest development in machines made for the rapid production of accurate gears.

If you are further interested in the design, operation or production possibilities of these machines, send for "Brown & Sharpe Gear Hobbing Machines," a well illustrated booklet covering both.



Hobbing a Spiral Gear

BROWN & SHARPE MFG. CO.
PROVIDENCE, R. I., U. S. A.

1924 Continued

From the Lewiston (Maine) *Journal*: "Mrs. Rollin Overton Smith of Syracuse, N. Y., has announced the engagement of her daughter, Miss Mary Southam Smith, to Horace Ingraham of Augusta. Miss Smith attended Syracuse University where she belonged to the Delta Gama Sorority. Mr. Ingraham is a member of the City Council of Augusta, the Augusta Rotary Club and the Augusta Lodge, A. F. & A. M. He is Treasurer of the Fuller-Holway Company of Augusta."

From the Dallas (Texas) *News*: "Announcement of the marriage of Miss Leona Crain and Fred R. Gamble of Boston, on March 28, at McGregor has been received. The couple left for a wedding trip to Washington, Philadelphia, New York and other points in the East before going to Boston, where they will make their home."

From the Springfield (Mass.) *Republican*: "An affair of special interest came Wednesday noon in the form of a bridge luncheon at which Mrs. Lincoln Smith was hostess at the Gill home on Northampton Street, to announce the engagement of her sister, Miss Dorothy Johnson Gill, to Kendall B. Castle, Jr., of Rochester, N. Y. Mr. Castle is connected with the engineering department of the Rochester Gas and Electric Works."

From the Stamford (Conn.) *Advocate*: "An outdoor setting of unusual beauty marked the wedding of Helen E. Drew and Foster Nichols Perry of Springfield, which occurred at the Drew home. Mr. and Mrs. Perry left by motor for a short tour and will be at home after Sept. 1, at 892 Worthington Street, Springfield. Mr. Perry is a mechanical engineer with the American Bosch Magneto Company. Mrs. Perry was graduated from Simmons College in 1924."

FRED S. HUNGERFORD, *Secretary*,
Valley View Club, Akron, Ohio.
E. J. HANLEY, *Assistant Secretary*,
29 Park Ave., Whitman, Mass.

COURSE IV

Cecil Thomas Kelly, Option 2, is at present working for the Municipal Engineers at Chicago in the capacity of Structural Designer. From his letters he is having a very interesting experience designing bridges, viaducts, park buildings, and other municipal structures of one kind or another. Kel always had a leaning for bridges and I sus-

pect he has found his hobby as well as his work. He expects to continue on home to Parkdale, Ore., in a year or two.

I am afraid Bill Delehanty has done what few engineers do and that is to give up engineering for architecture. But we will still call him Option 2, for he may come back and if the worst comes to worst we will call him an Option 2 man gone wrong. He is drawing up elevations for some of Starret and VanVleck's department stores right now and he rather likes it, I know. Bill also has an eye for business. The other day he confided in me that he was in the furniture business, collecting 50% on all deals. We yearlings will have no difficulty in understanding what prompted Bill to this, I am sure.

The *Boston Transcript* of June 2 has this to say of F. Leslie Ford, who was with this course during his Senior year: "In a movement to further the study in a more direct way of building materials as aesthetic objects, the office staff of J. Williams Beals' Sons, Boston architects, have formed The Pencil Guild, which is attracting much attention from others in the craft. In addition to the study of materials the guild plans to encourage, in building processes, the craftsmen qualities exemplified by the guilds of the middle ages . . . The pencil guild has elected officers as follows: . . . Secretary-Treasurer, F. Leslie Ford, a graduate of the Massachusetts Institute of Technology."

From the *Boston Herald* of April 10: "Mr. and Mrs. John Winslow Chapman of Newtonville announce the engagement of their daughter, Miss Sylvia Chapman, to Reginald Miner of Wellesley Hills. Miss Chapman is a senior at Wellesley College. Her fiancé is a graduate of Dartmouth, '21, and of the Massachusetts Institute of Technology, '24."

News of an all-Tech marriage is contained in an item in the *Brooklyn Citizen* of June 14, in which both the bride and groom were members of this Class and this course. The first paragraph tells the story, the others being devoted to the gowns, et cetera. "At the home of her parents, Mr. and Mrs. William E. Baxter of 309 Westminster Road, Miss Helen F. Baxter was married Friday evening, June, [and here the *Citizen* omitted the date] to Hugh Perrin, son of Mr. and Mrs. Arthur Perrin of Boston and Brookline, Mass., the Rev. Wallace J. Gardner officiating."

As for yours truly, also Option 2, I will try not to say too much. I left dear old Cambridge and Boston for the sands of Texas via Hampton, Va., and Chicago, Ill. I there acquired a pair of wings in the Army Air Service and have since had about a hundred hours or more in the air. On my way back from San Antonio I stopped in New York long enough to secure a position with the firm of York and Sawyer. How I got it has been a mystery to me until the other day when the man who hired me said I got in on the strength of a good-looking uniform. Anyhow, I haven't been fired yet, nor has any of the steel I have designed yet fallen down.

H. R. PERRA, *Secretary*,
195 Claremont Avenue, New York City.

COURSE V

Although our course had but a mere eleven members, we can boast of a high per cent returning for doctorates. Seven of us, all specializing in Organic Chemistry, are back, namely: Earl Messer, Sterling Webber, Stewart Luce, Francis Brown, Edward McArdle, Everett Kochmann, and myself.

Messer and Kochmann are both full-time assistants under Dr. Underwood. Messer is directing the work done for the United States Government on explosives at the Stute, under Professor Davis. Kochmann is doing research work for Dr. Underwood this summer, and he deserves much credit. — Luce has been out a year working with a road construction company, and has traveled all over New England. Although it was a promising position, he just couldn't resist the temptation to come back this summer and study for a higher degree. His thesis under Professor Davis is on Nitroso-Guanidine. — Brown is instructor in Inorganic Chemistry at the Stute this coming year, and is doing his thesis on the fixation of nitrogen, under the direction of Professor Mueller. — Webber is working this summer on high explosives for the United States Government, under the direction of Professor Davis. He has been appointed full-time assistant under Huntress. They tell me he's engaged to a young lady in Littleton. Congratulations. — McArdle, who was a crack high jumper, is doing his thesis under Jimmie Norris, on rates of reaction. At present he's plugging at his Physical Chemistry in which he takes an exam this fall for his Ph.D.

Our friend Fred Wagner is still working at du Pont's and finds the job extremely interesting, had a letter from him not so long ago. — Walter Gundelfinger was the first member of our course to enter the

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SHOES ?
SHIRTS ?
TIES ?
SOCKS ?



It's open season for our stock of everything men wear
—we put no limits to the size if you "bag," either!
Nor is the cost excessive.

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Wednesday, November 4th
Thursday, November 5th

Wednesday, November 18th
Thursday, November 19th

ROGERS PEET COMPANY

Broadway at Liberty Broadway at Warren Broadway at 13th St.

Herald Sq. at 35th St. New York City Fifth Ave. at 41st St.

Tremont at Bromfield
Boston, Massachusetts

1924 Continued

sphere of matrimony. He did his thesis at Tech on Cellulose, and is planning to establish his own business in the near future in that field, that is, artificial silk. We wish him the best of success. — Miss Gertrude Harris, our course co-ed, is employed by the Otis Clapp Company of Boston, drug manufacturers. She has been studying the effect of various drugs on mice. — José Loubriel is way down in Porto Rico, and is employed by Dr. Susoni at Arecibo, P. R., as a laboratory technician. Probably some day we'll hear he's head chemist for some sugar refinery. We all miss you, José.

I am assistant to Mr. Melcher, the chemical supply department head, and I find the work very interesting. I wish the course members would drop me a line much more often in the future than they have in the past.

HOWARD IRVING FITZ, *Secretary*,
37 Rockland St., Melrose Highlands, Mass.

COURSE VI

I had a nice letter from H. Gregory Shea. He says: "I am making an extensive tour of the West with the object of getting thorough, first hand information as regards conditions out here, particularly as they affect the public utility industries. After spending half a year with the Puget Sound Power and Light Company in Seattle, I have come down here to San Francisco where I am working for Pacific Gas and Electric Company." I understand that Mr. Shea is back in New York now but I haven't heard from him directly since the above letter.

Oscar Keefe of Course VI-A took his S.B., S.M. and commission in due form and then hied himself down to New York on August 1 and accepted a position with the Bell Telephone Laboratories doing radio research on broadcasting apparatus. He seems to like his job. He always was a radio enthusiast. Remember how he used to take extra courses in Radio Engineering, which he said were such fun? — I understand that Isaac Brimberg has charge of one of the broadcasting stations in New York City. I saw or rather caught a glimpse of Carlson wandering up Madison Avenue one evening in June, too. — Henry Simonds is still with the C. H. Tenney Company of Boston, but has been on temporary location on construction work in Suffern and West Nyack, N. Y., all summer. The wanderlust is beginning to attack Si and I expect that the next time I hear from him the letter will bear the stamp of some unheard of colony on the other side of the world. — Samuel Silverman is employed by the Musical Products Distributing Company of New York with the musical title of Radio Engineer. His address is 6505 20th Avenue, Brooklyn, N. Y.

As for myself, the job gets better by the hour. Just at present I'm conventing in Detroit and having a perfectly glorious time. I don't have much time to waste for everything I do is so interesting. I can wholeheartedly wish that all of you may be as fortunate in making a connection that is as satisfactory as mine.

I would like to make one appeal to the Course VI men. Please don't stand on ceremony and wait for me to write the first letters. I'm getting around to you just as fast as I can and will have written to you all soon. Please send me good full accounts of all of your activities. New jobs, vacation experiences, meetings with fellow Alumni, engagements, weddings, additions to your family, and whatnots. All of these are news, and the rest of us are interested. I can't pass it on unless you tell me, so do come across with the information. I'll be grateful for every bit. You can always address me at 80 Park Place, Newark. I'm looking forward to lots of letters and I'd hate to be disappointed.

HELEN HARDY, *Secretary*,
80 Park Place, Newark, N. J.

COURSE VIII & IX

From the *Boston Herald*: "Following an al fresco ceremonial of a week ago at the home of her parents, Mr. and Mrs. Vincent are visiting interesting points in Canada preparatory to establishing their home in London, Canada. Mr. Vincent is a Technology man and his bride a graduate of Connecticut College." Her name before her marriage on August 15 was Miss Mary Louise Bristol.

From the Worcester (Mass.) *Post* of July 28: "John J. Stanton of 69 Hamilton Street will sail for South America next Tuesday with the special commission on boundaries in the Tacna-Arica Arbitration which is headed by General Pershing. Stanton will work with the Commission that will determine the boundary line between Peru and Chile which has caused much discussion over a long period of years. The settling of the boundary line has been left to the American Commission which will be made up of a large group of surveyors. Stanton expects to be in South America for about a year."

J. W. CANNON, *Secretary*,
Hotel Manville, Manville, N. J.

THE PERSONNEL OFFICE

DIVISION OF INDUSTRIAL CO-
OPERATION AND RESEARCH —

*Calls the attention of Alumni to the
listings of available men and
positions listed below*

POSITIONS are OPEN to men of the
following qualifications:

No. 1000. A very high grade man, who is a combination of press agent and magazine writer, is needed to undertake general publicity work for an association of manufacturers. The products to be marketed are of a mechanical nature. The rate of pay will be not less than \$10,000 per year and the position can be filled only by a man who has the habit of success, who can gain entrée to all sorts of people, and who has a strong sales instinct.

No. 1001. Mechanical engineering graduate with about 15 years of broad and varied experience wishes to get in touch with a man located in the East who has had experience as an engineering salesman, with the idea of forming a partnership as consulting engineers. For a man who can sell engineering services and who would be interested in such an enterprise, this offers an attractive opportunity to develop a profitable business. References will be gladly exchanged.

No. 1002. Several competent senior architectural draftsmen are being sought by a reputable firm of architects located in Chicago. Generous salaries are offered to men who have the requisite ability.

No. 1003. Several graduate engineers, civil or mechanical, from 25 to 33 years of age, with at least two years of experience since leaving school, are needed for traveling sales work by a well-known company dealing in asbestos, magnesia and asphalt products. Contact will be with state, county, and municipal engineers, railway and traction company engineers, and contractors.

POSITIONS are WANTED
by men as described below:

No. 2000. Graduate of Chemical Engineering Course, who has had about ten years of general business, accounting, and auditing experience, is looking for an opportunity to become comptroller, assistant treasurer, or treasurer of a moderately large concern. Excellent personality and executive ability as well as sound business judgment are offered and a small investment might be made.

No. 2001. Chemical engineer and executive with ten years' experience in industrial work is seeking a responsible position where he can use his ability as an organizer and director as well as his chemical experience. Can show a successful record in laboratory and plant work involving research and development. For the past five years has been director of laboratories for a large, nationally known manufacturing plant, and has had responsibility for the entire chemical work of the plant. Has been particularly successful in handling subordinates and producing results.

*All inquiries should refer to numbers and
should be addressed to*

PERSONNEL SECTION

DIVISION OF INDUSTRIAL
CO-OPERATION AND RESEARCH

Massachusetts Institute of Technology

C A M B R I D G E

1924 Continued

COURSE X

Henry MacMillan, good old Hank, is the real headline for this issue. August 8, Dr. and Mrs. John Murdock MacInnis of Los Angeles announced the engagement of their daughter, Miss Mary Ruth MacInnis, to Hank. These Macs of ours are a mighty clan. No date has been set for the wedding. Hank is still in the laundry business and is located in Cincinnati. Congratulations, Henry MacMillan, Old Brugmann was the man who told on you.

Elmer Brugmann is still in the X-Ray Lab up at the Stute risking electrocution. He calls it a pussy-footed profession and is able despite the terrific bombardment to eat heartily at Durgin Park's. — J. T. Acker is in New York working in the lab of the Bell Telephone on permalloy applications. — Hal Hewitson and Freddy Reed are both with the Eastman Kodak Company. Hal is working on intensifying screens for use with X-rays. Freddy is working on colored movies. — Mackie and McCoy are assistants in the new Gas and Fuel course. During the summer Mackie went on with the coke where Loring left it, while McCoy was out in the State of Washington running a transit and level on the highways. — Worthington has been in the vicinity of Salt Lake City most of the summer, taking trips through southern Utah and the Colorado Canyon. He expects to be with the du Pont's this fall. Sargent Heath is down there now and Scout Bailey has been sent out to dig him up. Bailey is on a night shift in charge of making dyes at du Pont's. Bill Couch continues at A. D. Little's, and Swift is in the Electro-Chemical Lab at the Stute. Kallender is with the Dennison Manufacturing Company. Herrstrom is still in the Patent Office. — Bunk Marden is in a building and roofing laboratory. "Haven't got married yet so I'm still happy and having a good time."

Just when I was cussing because I didn't rate a vacation, along comes a letter with the very taste and smell of the greatest place in the — well, let's say New York. It was from Vic Moyes and the Adirondacks. He got his Master's Degree this summer and then took a little rest. What he's going to do this fall, I don't know. — September 12, I moved lock, stock and barrel to this new address and started right in to work for Johns-Manville. I am doing construction work on waterproofing and acid resisting insulation. Felix Stapleton is my side kick on this new job, so it should be a merry winter.

Hank is not the only one who is thinking of marriage. The Boston

Globe, way back on July 11, under the heading, "Miss Helen G. Duffy of E. Milton given shower," stated that "Miss Duffy is to marry Philip Saponaro of Boston this fall. Mr. Saponaro is a Boston College and Massachusetts Institute of Technology man." This makes me wonder how many others are not only keeping it out of the paper, but even keeping the good tidings from me.

WILLIAM B. COLEMAN, *Secretary*,
40 Morningside Ave., New York City

COURSE XIII

Greetings, Classmates and others. Lend but a few moments to read an extract from the log of the S.S. 5-420 still cruising the high seas with thirteen members aboard in search of success and legitimate plunder. I knew the summer was over when I received a letter from Hal Donovan stating that the opening gun was to be fired in the November issue of *The Review*.

Nothing has happened to mar the ship's good record and the summer has been a successful one to all of us. I will waste no more time but continue with an extract from our log. Frenchy Rosseau is afraid that if he does not get some shore duty soon he will never be able to stay ashore again. That is loving one's job, we'll say. During his last trip to Hamburg with the United American Lines aboard the S.S. *Reliance* he nearly ruined the married career of two couples when he got their licenses mixed up in the course of events and after some razzing by the passengers he retired as matrimonial director. Frenchy was always getting mixed up in such delicate matters and had better try the Hands Off policy.

Tony Rosado is rather disgusted with the way things are run down in Cuba and says he is coming to Boston if there is not some speed shown down there soon. He has gone into the operating department of the Cuba Power Company and says in part: "My experience along electrical lines, you know, was confined to the never-to-be-forgotten Triple E, which gave us many a bad hour in the last year of school. I suppose that I shall have to start at the bottom of things by oiling and cleaning something. That, together with a little outside studying that will have to be done on Professor Hudson's book will make the future for me." It is with sadness in our hearts we read of our own classmates one by one leaving the chosen field of endeavor to engage in another less glorious and interesting work. Some day we all hope the wheel of fortune may turn for us that we may see the forming of a hull, hear the trip of the hammer and feel the thrill of a ship we would be creating.

The electric game has not claimed all of us, however, for down south Ing Lee is striding forward in the operating end of the cotton-manufacturing game. In the last year he has covered the groundwork in that business and now is assistant superintendent of his mill and has charge of the night shift. It is indeed fortunate that he has a night shift to have charge of in these days of low production. He pays a fine tribute to his Tech training and rates it as the most practical thing in the world. We are all glad to hear of Ing's success and are rooting for him at the five yard line.

For one of our crew, this summer has been a sort of celebration. Gubby Holt has enjoyed the summer in Wolfeboro after receiving his M.I.T. shingle in June. Between his work in camp and riding on the New Haven to Quincy, he has found no time to write me but as the spoken word travels faster than the written word I am not in ignorance of his well being.

Peggy Joyce is still "Helloing" for the N. E. Tel. & Tel. Company as a traffic manager at Worcester. He studies the girls, keeps them in trim, and has raised their efficiency to 92 per cent since going there. Peggy has not yet fallen and so is making good on the job.

Brick battleships will sink as fast as ever but Jim Lord is not discouraged in his attempts to make them float. He has spent the summer at home in Fall River helping his dad carve out rock at their quarry. He may not be an expert in Triple E, but he certainly knows the stone business.

The Cunarder *Scythia* took one of our members away from us when she sailed last August with Jim Wong on her passenger list. His trip was smooth and uneventful. He has since visited London and the British Empire Exposition at Wembley. He is now located in Liverpool at the University Settlement, Nile Street, to learn the English language, as she is spoken there. He is working for Alfred Holt and Company, Ltd., in Liverpool for a while.

Of note to us all is the launching of the U. S. S. *Lexington* at Fore River, weighing, on launching, 27,000 tons, the heaviest ship ever launched. [Sic.] One of our fellow members had much to do with the calculation of her tanks and launching data. El Thayer had one job

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1924 Continued

in which we do not envy him, that of counting and measuring every support under the ship — some five or six thousand. El is sticking faithfully to his profession and is enjoying life working on the finest ship afloat. Most of his spare time this summer has been spent sailing his 28 footer in Quincy Bay.

You fellows have lost another bachelor member since the last record was written. Of course you will not be surprised as you have all been through much of my happiness with me in the pre-work days at Port-au-Pratt. After the ceremony on October 1 followed a trip through the White Mountains and finally the newly launched ship cast anchor for some time at 224 Broadway, Pawtucket, R. I. Now that I am more firmly established and will stay in nights I shall be able to jog the more silent members of the crew occasionally. I think that is about all of the log that is of real interest at the present time and until the next awakener from Hal Donovan comes I wish you all Good Luck!

G. FRED ASHWORTH, *Secretary*,
224 Broadway, Pawtucket, R. I.
G. C. JOYCE, *Assistant Secretary*,
N. E. Tel. & Tel Co., Worcester, Mass.

COURSE XIV

It has been several months since this course made its last appearance in *The Review*, but I have enough material this month to make up for one or two of the lapses. The response to my begging letter was remarkable and I feel pleased, but I shall never be satisfied until everyone sends in a reply. It's something to look forward to. I'm afraid I won't be able to hold my breath waiting for it, however. Twenty per cent of the course is now married, happily, of course, from the details.

The first letter received was from Al Cummings, who beat Bill Sturdy to it by an hour according to post office records displayed on the envelopes. Al says "I hardly know how to cover my wanderings since I saw you last, but here goes. I came out here in June to take the testing course which the G. E. offers. I landed in the Radio department and have been there ever since. I worked all summer (1924) testing super-hets. After becoming well acquainted with receivers I was transferred to the transmitter department. There I was assigned to the Carrier Current Section. I started in by taking a trip out to Detroit on a complaint job. That was in October and from then until

April I was away about half the time on different jobs, some installations and some repairs. Since then I have been located here at the office and expect to transfer to the Engineering Department shortly. . . . Well, getting around to what you seem interested in, we were married August 30, 1924, previous to which her name was Meta E. Miller of Atlantic, Mass." Al is at 11 Golf Ave., Schenectady, N. Y.

Stuart Morgan in a letter announces that "I was married on last Christmas to Miss Christine Holden of Fairhaven, Mass. We are still enjoying a perfect honeymoon. . . . I've been working since last November at the Carborundum Company, as an industrial research engineer. Very pleasant work and environment. No overtime and a monthly contract. Before I came to work up here I was employed by the American Smelting and Refining Company, Perth Amboy, N. J., as a blast furnace engineer." Mr. and Mrs. Morgan's address is 520 Cedar Ave., Niagara Falls, N. Y. Congratulations from the course to you and the other newlyweds, the Cummings.

The other married couple of the course, the Browns, also responded. It seems that marriage among other things makes a fellow remember to fill his responsibility of writing occasionally. Let's all get married! Brownie certainly advocates it and he's been married over a year now and is still enthusiastic about it. "If you want news," Brownie says, "as you say you do, I will start right off and tell you all I know. In the first place, I was transferred to the New York office about September 1, and am located at the above address (681 Ocean Ave., Brooklyn, N. Y.). If you should happen in the city, Mrs. Brown and I would be delighted to have you drop out to see us. If you haven't time for that, our office is at 165 Broadway on the twenty-sixth floor and I should be pleased to have any of the gang drop in to see me. Pennie, Davis, Marvin and Edmonds is the firm name, and that's easier to locate than I am. Just before I left Washington, I met Piroomoff in the Patent Office. We had a little chat and I found that he had been there for about a month doing some searching for Lewis. About the middle of August, I was at the Technology Club here for a night and met Seiger and Possiel."

Bill Sturdy is still with the A. T. & T., Room 1538, 195 Broadway. He has been transferred to work upon the development of transmission-measuring apparatus, although still in the department of development and research. And here's an interesting bit of news. "Since for eco-

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1924 Continued

conomic reasons, telephone electrical efficiency is very low, we express efficiency not in terms of percent, but of transmission units, which are inversely proportional to the logarithm of the percent efficiency." Get your slide-rule out of the attic and figure that one out! He expects to be sent to Chicago soon where the set he is developing is to be installed for a trial. His letter seems to show that he is still the ardent radio fan that he was. He is now building an eleven tube affair and hopes to be able to get Boston on it. If he doesn't I feel sorry for the set, and the eleven tubes.

John Duffy also broke the ice this month, and told me about some of the fellows I have not yet heard from this year. "Norris Johnston stopped off on his way to Niagara Falls to assist Morgan in the research lab of the Carborundum Company. Tom Mattson is with the Charles H. Tenney Company here as an industrial heating engineer. He is now in Cleveland at the Steel Treaters' Convention. That's about all the news I have from the XIV crowd. I saw Chic Kane recently and he expects to go to Cuba on some job in the fall. Archie Carothers is now in Cleveland with the Reliance Electric Manufacturing Company. Saw Geroge Neitlich a few weeks ago and he is still in the insurance game. Frank Barrett was still with the Telephone Company here when I last saw him. Fungus Young is with the Norton Company at Worcester. If I hear anything more I'll let you know." It was a very good letter. The only difficulty was that he didn't go into sufficient detail about himself. Upon personal solicitation at 820 Massachusetts Ave., Cambridge, he might tell you more about himself.

Piroomoff's is the last letter, but hardly the least! He wrote from Washington where he has been for about two months. But let him tell you. "I am having a wonderful time here, so much so that I could stay here almost indefinitely if it were not for the matters of grave importance at the Stute which compel my presence there for another year. So I am going back to Cambridge to join the ranks of the remnants of the old gang of ours, for I expect to find George Swift still raking diamonds out of electric furnaces, while Tom Mattson and Duffy seem to have finally decided to stop gypsying from one company to another." Piroomoff always feels well, he states, and has instructed me to publish this fact every month unless I am advised otherwise. He is not very friendly with the medical profession, it

would seem. Address him in care of the Chemical Engineering Department of the Institute.

I really want to acknowledge a card Norris sent me last May which was the only reply I received to a letter to the course. The news in it is all covered elsewhere so I'll proceed to tell a few things on myself. I can save some of it until a scarce month but just to mention myself always seems a necessity in these notes. I am working for the largest multiple line insurance company in the United States, the Travelers Insurance Company, and have been working for them continuously since the middle of February. My position carries no title unless it be that of "clerk" and I am still trying to learn some of the rudiments of the business with particular reference to casualty insurance.

At the last minute I have received a long letter from Norris which he states took him only 23 minutes to write. Upon that question I have my doubts, however, as he completely covered the paper. It seems that he has joined with Stuart Morgan and become one of the mainstays of the Carborundum Company in Niagara Falls. Briefly, he is well, happy, poor, and expects to cut his wisdom teeth in the next year or so. This last term he finished his thesis and expects to have received his degree probably by the time this is published. It's an S. M. in Electrochemistry and the thesis was on electrical conductivity and its variation with temperature of benzene, toluene and xylene. He spent the summer vacationing in northern New England, and on September 1 started in working at Niagara Falls under Dr. M. L. Hartmann, Dr. Hartmann being his only boss. He assures me that although Morgan has been there longer, Morgan has no control or supervision over his efforts. Tom Mattson is with the Charles H. Tenney Corporation at 200 Devonshire Street, Boston, and is rooming with Duffy in the Cambridge Y, according to his letter. So when you write to Duffy take your choice of addresses.

And this is really all for this month.

H. G. DONOVAN, *Secretary*,
80 Farmington Avenue, Hartford, Conn.
T. E. MATTSON, *Assistant Secretary*,
43 Riverdale Street, Allston, Mass.

COURSE XV

We of the Class of 1924 made a splendid showing during our first year as Alumni. Course XV helped materially to make this year a success. To maintain our standing we must work even harder this year — for on the intimacy of our contact rests the future of Technology. So let's coöperate, fellows, and render all the support that we can, so that we may show the world that last year was not a flash in the pan. Let your Secretary know about your progress and whereabouts — He will be glad to receive anything except collect telegrams.

In common with the other members of our Class, we of Course XV have two duties. One is to retain our membership in the Alumni Association — the other is to keep up our endowment payments. A retention of self-respect involves the fulfilling of both of these duties. We know that most of us have kept alive the former — Some of us have failed in the latter, and for this we must make amends. Due to the efforts of this Class, the endowment method has so far proven a success. Let us continue the good work — and we of this course must be at the top.

Due to the aforementioned reticence of most of us, this account must deal largely in generalities. Your Secretary has spent the summer running errands around Boston, and has seen very few of you in the flesh. Phil Blanchard is here for a short stay, the American Locomotive Plant being closed during his absence. Blay Atherton is taking an executive training course with the Jordan Marsh Company. Bill Rosenwald is doing London, for how long we don't know. Probably as long as London lasts — how about it, Rosy? Dick Holt is with the Charles H. Tenney Company at their Malden Plant.

From the Rochester, (N. Y.) *Herald*: "Mr. and Mrs. William McNally of Somerville announce the engagement of their daughter, Miss Mary Magdalene McNally, to Joseph M. Naughton son of Mr. and Mrs. M. W. Naughton of this city. Mr. Naughton, who was graduated from Massachusetts Institute of Technology with the Class of 1924, is residing in Indianapolis."

"Sam Zerkowsky is now Textile Expert" reads a headline from the Natchez, (Miss.) *Democrat* of July 8. And then reading on: "After graduation he became connected with Mr. Eugene Szepesi, one of the most prominent industrial engineers and consultants in the country specializing in the practical application of scientific management methods to textile mills." Sam, after spending some time in Rockford, Ill., is now located in the South with headquarters at Greenville, S. C.

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Shorty Manning sends this to Hal Donovan, the Gensec: "Mrs. James Nelson Waddell requests the honor of your presence at the marriage of her daughter Margaret Montgomery to Mr. William Hewson Manning on Wednesday afternoon, August 5 at half after four o'clock, Presbyterian Church, Charlottesville, Va." Congratulations, Shorty, and best wishes to you and Mrs. Manning.

And Paul Cardinal sent him a picture post card from Canada while he, Paul, was spending a month's vacation up there. The picture was entitled "The way we bring them home at Westport." It was a fish story, all right, because the two fish they had weighed more than the car and passengers, the car being an old-timer, by the way.

Current History for September contained a survey of United States Social and Economic Developments, by Dr. Dewey. It is well worth reading, if you have not already done so.

A total of about two hundred and fifty dollars has been raised for The George Swarz Memorial Fund, due to the generosity of many of you who contributed so willingly. By press time for these notes the medal will be ready and a future issue of *The Review* will contain a picture and description of it and an account of George's interest and support in all things relating to Technology.

May we wish you all a most successful year, and don't forget an occasional kind word to your struggling Secretary. He will remain silent for a month. Best regards to you all.

JOHN O. HOLDEN, *Secretary*,
110 Monroe Road, Quincy, Mass.

'25 There's not going to be any mention in these brief notes about coming back from a glorious summer vacation, dusting off the desk, powdering the sunburn, drying out the fishing lines, and finding the landlady's cat as much of a damn nuisance as ever. This office is simply assuming that all who were ingenious enough to make away with a degree had sufficient good sense to celebrate with a vacation. Some, the reports show, quickly found a clear path to the marriage altar. May their foolishness be upon their own heads. Further remarks on that question are out of order for one never can tell when he's going to be caught in the terrible vortex. As for the office force, stenographers, typists, errand boys and white-coats, they are still vacating in the wonderland of disorganization, and, single handed, the Secretary must toil through sleepless days and nights. Strongly he feels that the Lounger, or better, the entire news staff of *The Tech* should have had this job thrust upon them. But bye-gones are bye-gones and he will do his best to gather in the loose ends. These notes must necessarily be rather introductory. When the manuscripts are strewn high over desk and floor, and the Secretary gathers courage and familiarity with the work he intends publishing the most scathing remarks about any and all members of the Class. There is only one hope of salvation for the hapless victim. Write to your Secretary and tell him the truth. If it is convincing enough and sufficiently frequent immunity will be assured. Otherwise beware of the unprincipled viciousness of the pen.

Now there's our estimable President, Glen Bateman. From far away Montana his letter arrived just in time to nullify some nasty remarks. He seems to have forgotten even his arithmetic for he tells fabulous stories of working twenty-nine hours a day. Great devotion to the Dorr Company. Besides that, our handsome executive has a springtime love affair lasting into the fall. Good reason for those who know him well to marvel greatly.

Next in importance (every one will concede it) is Bed Groenewald. He also has followed the lure of western gold and is showing the Public Service Company of Colorado what a highly trained engineer really is. If Bed doesn't talk too much his good nature will surely reward him with a swivel chair job in the near future. As for the tribe of Cole and Johnston who used to engineer everything, and Frank Riegel and Mitchell who believed that smooth operation was the result of regular oiling, not to mention a hundred dignitaries and G. M.'s, and committee heads and sub-committee lookers-on — about all of them we are in complete ignorance. Before the ice and snow have closed all means of communication we expect to have word of them, and hope against hope that it will not be from the jail wardens.

The next stack of notes is wreathed in figures of angels and cupids. Good Lord! Were this office a matrimonial bureau it would have to double its force and then could report but half of the marriages and engagements. First of all a drafting room romance from Rogers — Mary Elizabeth Ritchey and Frederick Winsor were married on June 24. Long charettes necessarily confined them to Rogers, but all in the Class who didn't know them missed an acquaintance with an exceedingly charming couple. The writer and the whole class wish

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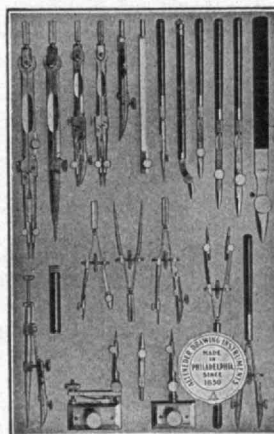
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1925 Continued

them happiness. Then Roger (Dinty II) Moore, after making away with an architectural prize of \$200 in cash for all-round excellence in his class made away with Miss Ruth Sheppard for an all-round peach of a girl and was married on June 20. So much for our architects. Great artists must be great lovers. The writer calls attention to the fact that, although he was obliged to write IV after his name for four years, he was an engineer.

As the notes decrease we find that Miss Edna Louise Baldwin became the bride of Onslow Stewart Robinson on June 22; that Miss Eleanor Hayes Fuller of Cambridge was married to Frederick Wade Greer on July 18; and that Miss Muriel Irene Torrey had become the wife of Harrison G. White.

Further and miscellaneous items inform us that, Ralph B. Norton has been appointed to a research fellowship in metallurgy at the Carnegie Institute of Technology. The following young geniuses we hear are organizing the General Electric Company of Schenectady,

N. Y., on a bigger and better basis: A. B. Bailey, T. H. Butler, J. R. G. Hardy, A. P. Kellogg, R. R. Gamachee, F. M. Corliss, C. A. Ross, and K. R. Vantassel.

Such is our meagre line of misinformation. As for the Secretary, if anyone cares about him (one usually doesn't for Secretaries), he is hard at work constructing New York's latest skyscrapers. If they stand he will be at home to your visits when you go through the metropolis. If they don't he's going to turn hunter and trapper in Canada after serving his term for involuntary manslaughter. He may anyway for the lure of a three weeks camping trip in the Canadian wilds nearly coaxed him from the ranks of the would-be engineers.

Here follows the benediction — don't trust your slide rule, check all your figures twice, and don't mind what the professor told you about never amounting to anything anyway.

CHARLES R. MUHLENBERG, *Secretary*,
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